DOCUMENT RESUME

ED 172 670 HE 011 481

AUTHOR	Mayo, G. Douglas, Ed.
TITLE	Improving Small College Instruction Through Small Grants. J. W. Brister Library Monograph Series 10.
SPONS AGENCY	Memphis State Univ., Tenn.
PUB DATE	79
NOTE	91p.
AVAILABLE FROM	Memphis State University, Memphis, Tennessee 38152
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Audiovisual Instruction; *College Faculty; Computers; Curriculum Development; *Educational Strategies; Educational Technology; *Faculty Development; Financial Support; *Grants; Higher Education; Institutional Research; *Instructional Improvement; *Instructional Innovation; Projects; Video Equipment

ABSTRACT

Instructional improvement projects are described that were conducted during 1978 as part of a program at Memphis State University that gives small grants to faculty members. Full-time faculty members were invited to submit proposals they believed would lead to improvement of learning in their courses and might offer broad instructional implications. Seven criteria for selection of proposals for funding are explained. The budgets for the proposals funded ranged from $300 to $1600, with a mean of $861. The projects, divided into the following five categories, are described in detail: instructional planning and development, video technology in instruction, computer technology in instruction, audio-visual support of instruction, and faculty seminar in instructional improvement. In addition to providing money, the Center for Instructional Service and Research at Memphis State also helps faculty members conduct each project through systematic course development, development of instructional aids, application of educational technology, and design of evaluation plans. (BH)

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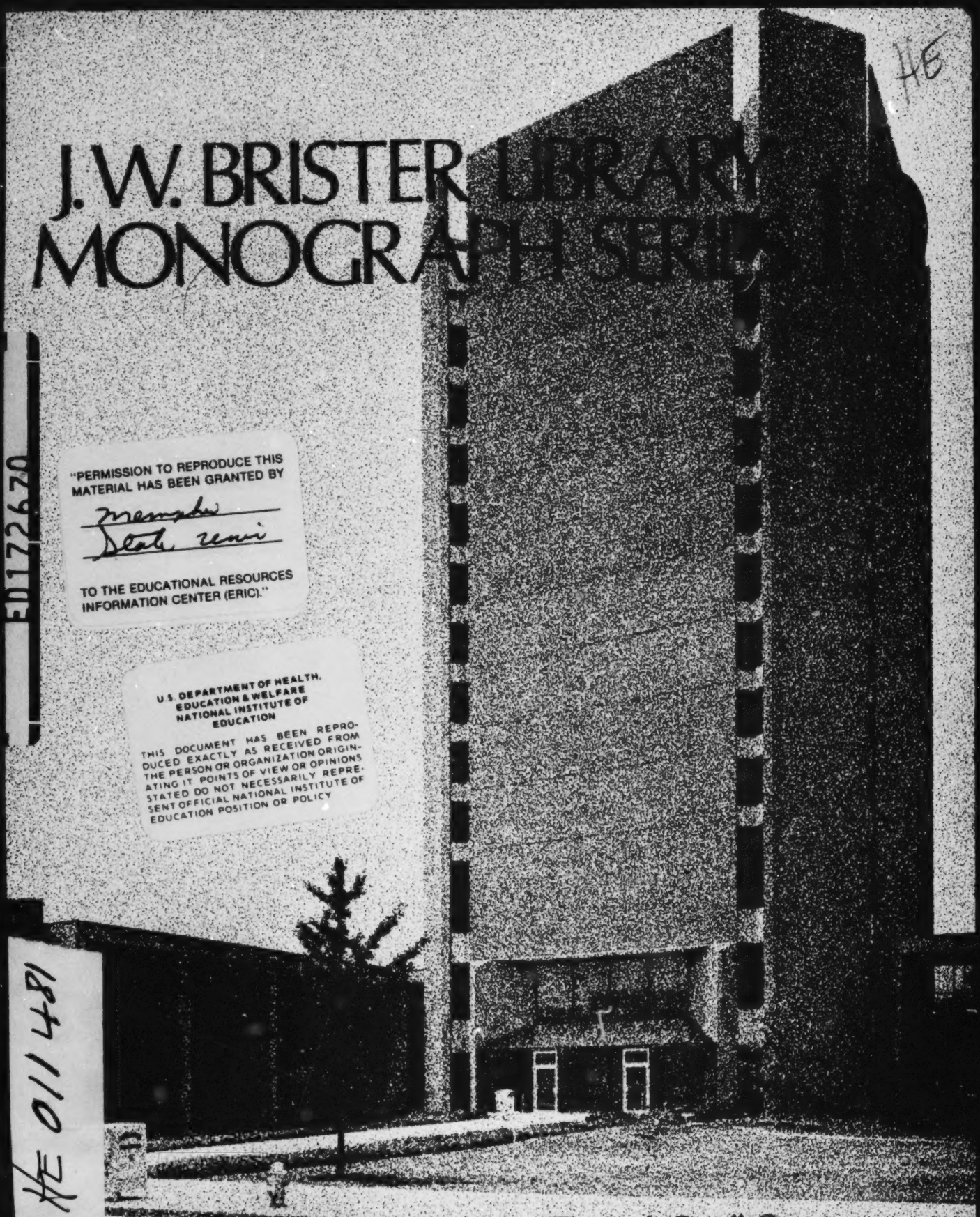

Improving College Instruction Through Small Grants

2

IMPROVING COLLEGE INSTRUCTION THROUGH SMALL GRANTS

Edited by

G. Douglas Mayo

Memphis State University

Memphis, Tennessee

An Equal Opportunity University

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PREFACE

In recent years a number of institutions have encouraged their faculties to improve instruction by means of providing small grants to faculty members to carry out promising proposals for instructional improvement. A program of this type was initiated at Memphis State University early in 1974. The reports contained herein describe projects conducted during the fourth year of the program. Similar documents containing reports on projects conducted during the first three years were published in monographs 4, 5, and 7 of the J. W. Brister Monograph Series.

The procedure used in selecting small grant projects for funding consisted of inviting full-time faculty members to submit proposals which they felt would lead to improvement of learning in their courses and perhaps would have broader applications. It was anticipated that resources available to support such projects would not be sufficient to support all of the proposals that would be submitted. It was also felt that it would be helpful to the faculty to know in advance the basis on which projects would be selected. Therefore, the invitation to submit proposals contained a list of seven criteria, which were as follows:

1) First and foremost, the proposed project should have a good probability of improving learning in the course in which it was undertaken. Stated differently, the basic concept or idea should be sound and capable of effective implementation

2) The prospect for continued use of the improvement in the course in which the project was conducted should be good

3) Projects having a probable "multiplier effect" would tend to receive preference. One aspect of this is the number of students whose learning would be affected. Thus, undergraduate courses having several sections would be good prospects. Another aspect of a "multiplier effect" would be the extent to which improved learning demonstrated in the course in which the project was conducted could be generalized to a broader spectrum of university courses

4) The effects of the project should be capable of adequate measurement. Upon completion of the project, it is desirable to know to what extent the objectives of the project were achieved, together with any unfavorable side-effects

5) The project should be more appropriate to the purpose of this small grant program than to other University sponsored programs. For example, projects which test hypotheses concerning the basic nature or conditions of learning were viewed as more appropriately supported by grants for faculty research than by this program. In the case of the present program, the necessary basic knowledge already should be available, and the probability should be good that it could be applied to bring about improvement in learning

6) Instances in which any required faculty released time could be provided by the academic departments concerned, leaving support of other requirements of the project to the small grant program, would receive some preference over projects that required a major part of the grant for faculty salaries

7) Insofar as practicable, different types of projects and projects from a number of different departments would be selected.

Each of the proposals contained a proposed budget which listed the type of support that would be required and the amount of each item. The budgets for the proposals that were funded ranged from $300 to $1600 with a mean of $861. Budget items submitted in one or more project proposals included expenses for: supplies, equipment, released time or overload pay for the faculty member, salaries for student assistants, and funds for such services as clerical, photographic, and printing. As it turned out, the projects fell naturally into five areas: instructional planning and development, video technology in instruction, computer technology in instruction, audio-visual support of instruction, and faculty seminars in instructional improvement. These topical areas will be recognized as the five parts into which the monograph is divided.

The program of small grants to facilitate learning is administered by the Center for Instructional Service and Research. In addition to providing monetary support for approved budget items of the projects, the Center also assists the faculty members conducting each project, to the extent that they desire, in several areas in which the Center purports to have special competence. These areas include: systematic course development, development of instructional aids, applications of educational technology, and design of evaluation plans.

As editor, I wish to acknowledge the very obvious contribution of each of the contributors to the monograph, whose names are listed in the table of contents. Thanks also are due to members of the Center for Instructional Service and Research for their constructive participation in a number of the projects, and in particular to Mrs. Barbara Dorsett, who handled the logistic aspects of each of the projects and assumed significant responsibilities in the preparation of the manuscript. Finally, the program of small grants to facilitate learning has received strong support from top administrative officials of the University, including, especially, the

office of the Vice President for Academic Affairs and the Dean of each of the Colleges. This support and the support of Dr. Lester Pourciau, Director of Libraries, in proposing that the composite report of the projects be included in the J. W. Brister Library Monograph Series were especially instrumental in bringing the monograph to fruition.

G. Douglas Mayo, Director

Center for Instructional Service and Research

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PART I
INSTRUCTIONAL PLANNING AND DEVELOPMENT

IMPLEMENTING THE PERSONALIZED SYSTEM OF INSTRUCTION IN TWO UNDERGRADUATE EDUCATION COURSES

Donald A. Dellow and E. Dean Butler, Department of Foundations of Education

The purpose of the project was development and implementation of the Personalized System of Instruction (PSI) in an undergraduate interdisciplinary course in the Department of Foundations of Education. As proposed, PSI was to be incorporated into a 6 semester hour course team-taught by the writers during both regular semesters of the 1977-78 academic year. The instructional strategy was to provide a self-pacing, individualized system as a means of accomplishing traditional content objectives of the combined course. As implemented, the PSI design was utilized for two components of the course; those dealing with the principles of human growth and development, content of Educational Psychology (EDPS) 2111, and educational policy concepts and issues, content of Educational Foundations (EDFD) 2011. Other course components included human relations training, simulation of the school as an educational bureaucracy, field experiences in which observation and participation was conducted in various school and community settings, and independent study accomplished through directed inquiry into topics related to the course. The course components were conceptualized as encompassing diverse cognitive and affective objectives to be achieved by a variety of instructional strategies.

The seed grant funding provided support for the PSI components of the course and will be the principal focus of this report. Descriptions of the total course design are found in a paper entitled "Instructional Innovation in a Traditional College Setting: Combining Instructional Strategies" presented at the Fourth International Conference on Improving University Teaching at Aachen, F.R. Germany (Dellow and Butler, 1978). Other papers presenting theoretical material and empirical data related to the course are being prepared for publication.

DEVELOPMENT OF THE PSI UNITS

The PSI design, also known as the Keller Plan, is an instructional management system through which course content is divided and sequenced to promote efficiency in learning. The plan also necessitates the use of study guides to aid the students in attaining the content objectives, an assessment plan incorporating unit evaluations and mastery learning, and effective coordination of written materials and personnel resources to aid the self-pacing of students toward attainment of the objectives. These dimensions were incorporated into the units designed during the development stage and were implemented in the two regular semesters of the 1977-78 academic year.

Initial development of the PSI materials began in the early summer of 1977 under the direction of the two authors who had jointly taught a combined section of the two courses during the previous year. Units which had been previously incorporated into the course were modified to fit the PSI format and written materials were prepared to be used in guiding students through the adopted texts. These initial study guides were field-tested during the 1977 summer term in regularly scheduled sections of the courses and revised prior to their use in the fall semester of 1977. Assistance in the production of the guides was provided by two undergraduate students who had completed the course with the two instructors during the previous spring. These students were familiar with the course content and were able to bring to the preparation of the written guides student perspectives which complemented the instructional strategies embraced by the two instructors. The students knew the text materials emphasized by the instructors and, when acquainted with the format to be used in the study guides, were able to make important contributions to the writing of the guides.

During this initial stage of development, unit examinations were also constructed with test items designed to assess mastery of the various unit objectives. The test items were field tested also during the 1977 summer term and revised prior to use in the two subsequent semesters. Unit examinations were structured to mesh with the "unit-perfection" characteristic of PSI; i.e., students were to demonstrate mastery of the unit before movement into new materials was permitted. This required the preparation of more than one form of the unit tests. Mastery learning requires self-pacing; thus the examinations were designed so that they could be scored by student proctors, or by the instructors, as individual learning rates and motivation styles dictate.

IMPLEMENTATION OF THE PSI SYSTEM WITHIN THE TOTAL COURSE STRUCTURE

The implementation of the interdisciplinary course was the responsibility of the two authors with assistance provided by a student tutor-proctor. Sequencing of the course activities followed a plan designed by the authors and involved coordinating large group activities along with facilitating student movement through the self-pacing system of PSI. The overall plan for the semester was presented to the students in the initial class meeting and various printed directions and guides provided. These guides detailed cognitive objectives and related text materials for the two PSI designed course components. Printed materials also specified individual assignments and schedules of large groups class activities involving human relations training and simulation and established the ground rules which would govern instructors' and students' roles and responsibilities.

Since the combined course was scheduled for a three hour block of time two days a week during the semester, course time allocations were set aside during the last hour of each session for PSI testing, instructor-led discussions of text material, tutoring and working with individual and/or small groups as needed. The first part of each class period was devoted to large group activities coordinated by both instructors. Scheduled field

experiences, on occasions, did utilize the total class time for a particular day and no testing or tutoring was provided.

While student participation in the large group sessions was required, no student was required to participate in PSI activities other than scoring the various unit tests. Attendance at all instructor-led discussions, question and answer periods, and tutorial activities were optional. Comprehensive records were kept on the progress of the students and, when needed, the instructors counseled students who were perceived as negligent in assuming personal responsibility for studying the text materials and scoring the unit examinations. While completion dates were established for mastery level performances on the exams, this too remained flexible and students were allowed to postpone test scoring until they felt they were fully prepared. On the other hand, some students moved quickly through the instructional units and completed the PSI units well before the end of the completion dates and the end of the semester.

EVALUATION OF THE PROJECT

Since the original purpose of the project was to implement a new instructional strategy, there was no attempt to establish a control group against which the achievement levels of the students could be compared. Rather, the two instructors' assessment of the implementation and some indication of student reaction to the PSI format were considered to be the primary means of evaluation. The following sections of this report will present the various evaluation components.

Student Satisfaction with PSI Characteristics

To assess student perceptions of PSI, each student was asked to complete the PSI Course Characteristics Preference Worksheet (PSI-CCPW) at the termination of the course (see Appendix A). It should be noted that students signed their names on the form and had knowledge of their final grades for the two courses. Students were informed that our interest was in determining their perceptions of PSI characteristics which would assist us in deciding if future courses should be structured in a similar way. In our opinion, the students did not perceive an evaluation of the PSI characteristics as an evaluation of the instructors themselves.

In essence, the PSI-CCPW was operationally defined as providing a measure of student satisfaction with PSI. When data from the PSI-CCPW were compiled, satisfaction scores were obtained for each of the eight PSI characteristics listed and an overall satisfaction score which was the summation of scores for items 1 through 8. The student responses for each item were summed across the two course ratings to provide one score for each characteristic (minimum=2, maximum=10). The same procedure was used both semesters the course was offered. Statistical analyses (ANOVA) of the data for the two semesters revealed no significant differences between the two semesters, consequently the data were combined for this discussion.

The satisfaction scores for the eight PSI characteristics (items 1-8) ranged from $\bar{X} = 7.35$ to $\bar{X} = 9.48$, indicating overall satisfaction with

PSI (Table 1). Positive perceptions are well demonstrated by the overall mean of the summation of the eight items for all 54 subjects ($\bar{X}$ = 66.8 of a possible 80). Although the Hawthorne effect cannot be discounted, students viewed PSI characteristics in a positive manner.

Two of the eight PSI characteristics received mean ratings considerably higher than the rest. Item 7, "Receiving feedback within the hour," and item 8, "students know their progress in the course," received ratings of $\bar{X}$ = 9.37 and $\bar{X}$ = 9.48, respectively. These high average ratings indicate strong agreement among the students with respect to their satisfaction in knowing the results of their performance due to quick feedback and frequent testing.

Mean ratings which grouped together included: "Movement to new material after demonstrating mastery of previous work" ($\bar{X}$ = 8.48), "Exams cover material in content objectives" ($\bar{X}$ = 8.44), and "Use of content objectives to specify content instructor believes important" ($\bar{X}$ = 8.24). Although perceived positively, these organizational characteristics were apparently less important to the students than those characteristics more related to their own performance.

Table 1
(N = 54)

Mean Satisfaction Scores for PSI Charactersitics

	Mean	Standard Deviation
1. Opportunity for self-pacing	7.63	1.93
2. Movement to new material after demonstrating mastery	8.48	1.45
3. Use of lectures and demonstrations as vehicles of motivation...	7.76	2.02
4. Exams cover material in book only, not class dis's.	7.35	2.12
5. Use of specific content objectives	8.24	1.59
6. Exams are to reflect content specified in objectives	8.44	1.70
7. Students receive feedback on tests with the hour	9.37	1.35
8. Students were able to know progress in course	9.48	1.04
TOTAL PSI (1-8)	66.80	7.86

PSI characteristics receiving the lowest ratings were: "Use of lectures and demonstrations as vehicles of motivation rather than sources of critical information" ($\bar{X}$ = 7.76), "Opportunity for self-pacing" ($\bar{X}$ = 7.63), and Exams cover material in the books only, not class discussions or presentations" ($\bar{X}$ = 7.35). Two of these PSI characteristics depart substantially from conventional patterns found in higher education and may have been difficult for the students to accommodate. There were few lectures or demonstrations and course activities dealing with human relations and simulation occupied most of the regular class sessions. Although most students adjusted to this variance with tradition, some reported that it was difficult to wean themselves from dependence on the traditional lecture-approach. The opportunity for self-pacing, and therefore early completion of testing, was utilized by few of the students. In fact, procrastination was evidenced by most of the students. Knowing that they had an exam or assignment for other courses due on a certain date often provided an excuse not to pace themselves and take the exams at regular intervals. Thus, it is interesting that the opportunity for self-pacing was rated no lower than it was. Instructor competencies may also be viewed as factors contributing directly to the lower ratings obtained for "lectures being motivational." Lecture roles established over the years are not easily modified and it is possible that the instructors did not perform well the motivational function.

Student Perceptions of PSI As a Function of Selected Demographic Variables

Student perceptions of PSI characteristics may offer important insights into preferred learning-styles of students. A primary purpose of using PSI in concert with other instructional activities was to provide a variety of experiences to accommodate more learning-styles than is normally possible in a traditional course. It was of interest, then, to the authors to determine whether PSI was perceived differentially by students on the basis of their sex, race, age, self-reported grade point average, and final grades earned in the courses. In an effort to examine the possible effects of these variables, analysis of variance (ANOVA) procedures were utilized.

Examination of Table 2 reveals a significant difference in satisfaction with the "self-pacing" characteristic on the basis of final-grade grouping. The students received a grade for each of the two courses that made up the combined course. Using standard quality-points interpretation (A=4, B=3, C=2, D=1), a grade point total for the two courses was obtained. Those students with totals of 3 to 5 points were designated as the low-achievement group and students having 6 to 8 points were designated as the high-achievement group. The low-achievement group (N=24) had a mean of 7.04 on the self-pacing variable, while the high-achievement group had a mean of 8.10. The difference between the two means was significant ($p < .05$) indicating those receiving the lowergrades were significantly less satisfied with the self-pacing aspect.

This significant difference was supported by the findings on the number of weeks needed to complete the Human Growth and Development course. Over the two semesters of operation, only nine students completed the human growth and development testing more than two weeks before the end of the semester. Of those nine completing early, seven were in the high achievement group. This would seem to indicate that those students who did take advantage of the self-pacing to finish the course-work early were typically those who were doing well (A's and B's) in the course. Similar completion rates were associated with the second course.

Table 2

ANOVA Summary Table for Comparison of Mean Satisfaction Scores for PSI Course Characteristics and Selected Demographic Variables

	Sex	Race (B/W)	Self-reported G.P.A.[1]	Age[2]	Achiev. level in 2011-2111[3]
1. Self-pacing	n.s.	n.s.	n.s.	n.s.	Lo < Hi $p < .05$
2. Mastery before movement to new material	M < F $p < .05$	n.s.	n.s.	n.s.	n.s.
3. Lectures as motivational	M < F $p < .01$	n.s.	n.s.	n.s.	n.s.
4. Exams on material in book only	n.s.	n.s.	n.s.	n.s.	n.s.
5. Content specified in content obj's.	n.s.	n.s.	n.s.	n.s.	n.s.
6. Exams cover material in content obj's.	n.s.	n.s.	n.s.	n.s.	n.s.
7. Immediate feedback on test results	n.s.	n.s.	n.s.	n.s.	n.s.
8. Students are able to assess their own prog.	n.s.	B < W $p < .05$	n.s.	n.s.	n.s.
PSI TOTAL, overall satisfaction with items 1 - 8	n.s.	B < W $p < .05$	n.s.	n.s.	

n.s. = not significant

[1] A, B, C, D

[2] 20 and less, 21-31, 32-40

[3] Low/High

When satisfaction with self-pacing was examined by sex, race, self-reported grade point average, and age, there were no significant differences in perception on the PSI-CCPW.

Further examination of Table 2 reveals that males ($N = 17$, $\bar{X} = 7.88$) were less satisfied than females ($N = 37$, $\bar{X} = 8.76$) with the PSI characteristic of "mastery before movement to new material" ($p < .05$). The PSI characteristic of "use of lectures and demonstrations as vehicles of motivation..." was also perceived as less preferred by males ($\bar{X} = 6.53$) than by females ($\bar{X} = 8.32$) ($p < .01$). One interpretation of this finding would seem to be that males prefer the traditional emphasis placed on lectures as sources of critical information for examinations.

The other PSI characteristic perceived significantly different was "students are able to assess their own progress..."While black students ($N = 13$, $\bar{X} = 8.92$) rated the characteristic relatively high, white students rated it significantly ($p < .05$) higher ($N = 41$, $\bar{X} = 9.65$). Knowledge of their progress was perceived positively by both groups though the black students were apparently less concerned about their progress in the course.

Perusal of the total scores for all PSI characteristics in Table 2 indicates that black students scored lower on the PSI characteristics ($p < .05$). On each of the eight characteristics black students indicated a lower average satisfaction score, with only one being significant. The accumulation of these differences contributes to the significant difference of total PSI satisfaction.

The several significant differences in perceived satisfaction suggest the need for additional study. Since, however, only five of the forty-five analyses reflected significant differences, all students generally perceived PSI, as implemented in the present course format, in much the same way. Student perceptions and informal comments indicated positive support for the PSI technology.

Student Withdrawal Rates

A typical student reaction to a new instructional experience is a high withdrawal rate from a course. Robin (1976) reported withdrawal rates for students in PSI-type courses to be 40% higher than for lecture-discussion courses. Student dropout rates in three Keller Plan courses were reported at 14.4%, 25%, and 14% while three comparable lecture sections reported withdrawal rates of 5.1%, 5.8%, and 4.9% (Born and Whelan, 1973).

In analyzing student withdrawals from the course, all data were combined. Student withdrawals during the first two weeks of the semester were not included since there is considerable dropping and adding during that time and probably does not relate as much to the course or instructor as to other scheduling factors. Withdrawal data in Table 3 include official student withdrawals and students receiving F's. Those students receiving F's for the courses are perceived as unable to successfully cope with the instructional technology, for numerous reasons, and are defined here as withdrawals even though it was not official. On the basis of the data

reported in Table 3, the PSI course had a drop and failure rate of 33% for the fall semester and 31% for the spring semester. This is approximately double the rate for the regular sections of the course.

High withdrawal rates suggest that PSI components of the course may tend to polarize students into those who really like the course and those who dislike it enough to withdraw or sit back and get an F because they stopped coming to class. This suggests a need for a variety of instructional strategies where there are multiple sections of a course. Students should have the opportunity to move into a course structure that best fits their learning style or learning preference.

The extent to which course components other than PSI influenced withdrawals is unknown. Demands made on the students were substantial and collectively the various course components may have been too much for some to handle. This dimension stands in need of further study also.

Table 3

Comparison of PSI Course Dropout Rates with Other Comparable Courses for the Spring and Fall Semester (1977-78)

	Fall 1977		Spring 1978	
	Dropout Rate	Dropouts & F's	Dropout Rate	Dropouts & F's
All sections of Human Growth & Development and Social Foundations not using PSI	11% (24 Sec's., 650 S's)	15%	13% (24 Sec's., 506 S's)	18%
Experimental PSI Course	18% (33 S's)	33%	15% (39 S's)	31%

INSTRUCTOR EVALUATION

From the perspective of the instructor, PSI is seen as an important alternative to conventional lecture/discussion classes, in part, because it permits additional class time to be devoted to objectives other than those associated with traditional course content. As an economizing instructional technology within the formal classroom setting, reduced instructor classtime is needed in moving toward knowledge outcomes associated with established course objectives. Thus regularly scheduled class time can be devoted to activities which rely heavily on participatory group activities and interactive modes involving student-instructor and student-student interactions.

At the same time, the technology requires that students devote more out-of-class time to mastery of course material than is generally required under the lecture/discussion format. Many students need little time in formal class settings to master the objectives, provided the study-guides are adequate and the learner properly motivated in working with the materials and texts. Thus the learners' role is modified by the system as they are encouraged to become independent learners and given responsibility for their own progress. Instructor roles also change as students depend less on instructor-led discussions of text materials. Instructors can move toward more individualized patterns of student-instructor interactions, assisting those who need special help with specific material and allocating instructor time to those who need it the most. As a result of the personalized mode, instructors can more readily identify student strengths and weaknesses and come to know learners as individuals, a dimension difficult to accomplish under conventional teaching designs in university settings.

Numerous unit evaluations, proctor-tutor roles, and unit mastery requirements assist the instructor in learning the various learning styles of the students and reveal early in the semester the personal orientations and motivations of each student. This dimension of PSI is thus viewed as most favorable, particularly if a college instructor values expanded knowledge of each learner's individual strengths and weaknesses. High satisfaction ratings of students completing the course support this idea. The high withdrawal rate, however, indicates that the instructors were not as effective as they might have been in assisting all students in their educational experiences.

Other negative aspects of the PSI design relate to extensive record-keeping, the amount of time needed to develop and revise course materials, problems of accommodating text materials to the PSI format, and frustrations in developing the kinds of organizational strategies and abilities necessitated by the system. Most of these dimensions, however, relate to the newness of the design and instructor limitations associated with individualized approaches. After being schooled in traditional modes and having used traditional methods for several years as college instructors, learning new approaches is not easily accomplished. Moreover, little help can be expected from associates who may be less than encouraging and often see little value in what is being done.

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APPENDIX A

PSI Course Characteristics Preference Worksheet — Dellow/Butler

Course Characteristic: I personally	EDFD 2011 Strongly Dislike				Strongly Prefer	EDPS 2111 Strongly Dislike				Strongly Prefer
1. Opportunity for modified self-pacing.	1	2	3	4	5	1	2	3	4	5
2. Movement to new material only after demonstrating mastery of previous work.	1	2	3	4	5	1	2	3	4	5
3. Use of lectures and demonstration as vehicles of motivation rather than as sources of critical information.	1	2	3	4	5	1	2	3	4	5
4. Exams cover material in book only, not class discussions or presentations.	1	2	3	4	5	1	2	3	4	5
5. Use of specific content questions to identify content instructor believes important.	1	2	3	4	5	1	2	3	4	5
6. Exams are to reflect the content specified in the specific content Q's.	1	2	3	4	5	1	2	3	4	5
7. Students receive feedback on test grades within the hour.	1	2	3	4	5	1	2	3	4	5
8. Students are able to know their progress in the course.	1	2	3	4	5	1	2	3	4	5

9. How would you rate the amount of required reading material in this course? too little 1 2 3 4 5 too much

10. How would you rate the number of tests? too few 1 2 3 4 5 too many

11. If you had to do the same amount of reading but had an option of taking fewer tests, each over a larger unit of study, or more tests over smaller units, which would you prefer? (check one)

larger units and fewer tests_____
smaller units and more tests_____

LABORATORY MANUALS FOR LIGHTING AND SOUND INSTRUCTION

John J. McFadden, Jr.
Department of Theatre and Communication Arts

The scope of this project was to develop form and content for a series of laboratory manuals which would supplement instruction in the areas of theatrical lighting and sound design, and which would be adaptable to unsupervised laboratory work as well as to supervised situations. The content would be directly related to the presently existing equipment complement in the Department of Theatre and Communication Arts. Pilot manuals were envisioned, which would then be revised, expanded, and supplemented as equipment and instructional needs changed.

RATIONALE FOR THE PROJECT

There appeared to be a need for a method whereby students could develop a familiarity with, and technical understanding of the various items of equipment related to theatrical lighting and sound. As part of the syllabus of the academic courses in lighting and sound, these items of equipment are introduced and the theory of their application explained. There is not sufficient time, however, to fully delve into all the details and techniques involved in such equipment. The student, therefore, gains a basic understanding of the equipment but not a fully conversant one. To supplement the student's lecture information, there are a variety of production opportunities (related to the Department's season of productions) in which the student can participate. This activity will give the student an opportunity to work with the equipment and gain a more complete knowledge of it as the production evolves. There is a drawback, however, in that very often the necessities of the production schedule do not allow time for experimentation or an evolutionary introduction to the equipment.

As an alternative, therefore, I proposed that laboratory manuals be designed which would allow the student to gain the necessary familiarity with the equipment in a laboratory situation outside the regularly scheduled class session and production activity. The student could work, at his (her) own pace and interest level, with the equipment.

A further consideration supporting the need for the laboratory manuals was the complexity of some of the equipment and the informational resources provided by the manufacturers. Many of the items of equipment represented state-of-the-art developments and as such were somewhat complex. They were not so complex as to be beyond the student's capability, but they did require a thorough understanding in order to be put to greatest application. The informational resources provided by the manufacturers was in many cases not very helpful for a student. The information was either too technical (of a service technician's level), or in many cases purely cosmetic and more

for advertizing value than for instruction. Certain informational resources provided were helpful, but they did not speak to particularly theatrical application in most cases. In summary the manufacturer's informational material could not be relied on as a consistent source of information for the student.

ACADEMIC RELATIONSHIP OF THE PROJECT

The project was not undertaken directly under the auspices of any one course but rather in support of a group of courses. At the time the project commenced there existed the following courses which directly related to it:

Theatrical Lighting I
Theatrical Lighting II
Special Problems - Sound for the theatre
Special Problems - Special effects for theatre
Production Lab - Lights
Production Lab - Sound
Graduate Practicum
Graduate Special Problems
Research in Theatre

In addition to these courses, the Department's season of public and in-house productions would require staff who would be using the equipment treated by the project. The number of students involved in the courses was approximately 30-40 and the number of students directly involved by nature of other production activity was approximately 10-15. In addition there were various other courses and activities of the Department which would support but did not dilute the original need or objectives for the project.

DESCRIPTION OF PROCEDURE

In the initial phase of the project the objective was to consolidate the existing informational resources relating to the equipment in question. With this information compiled it was possible to determine more accurately which areas needed what type of support from the laboratory manuals. The existing information consisted of manufacturer's promotional and instructional literature, class lecture notes and text materials, and departmental reference materials such as periodicals.

Following this, I examined examples of laboratory manuals in use in other non-scientific areas (interior design, art, etc.) in an effort to determine which format would be best suited to the manuals for theatre. This of course related to the existing informational resources and the nature of the equipment.

In the lighting area the task centered around one composite piece of equipment, the lighting control system. This was the main operational piece of

equipment for the lighting students to deal with. Other items such as lighting luminaries were dealt with rather completely in classroom lectures and are quite fundamental in operation. The objective here was to develop a manual which would enable the student to understand the operational aspects of the lighting control system but not necessarily the electronic design and construction of the system. The lighting control system is a mini-computer based, software controlled, lighting control and memory system. Its electronic design is thus quite complex and need not be understood in order for the student to effectively operate the system. The preliminary instructional material which I had developed with the manufacturer (upon installation) appeared to be quite sound as a base source, but it needed complementing with exercises and some supportive material. Therefore rather than separating the descriptive material from the laboratory exercises, the information was edited to include laboratory exercises within the descriptive material. To this, supportive materials (such as block diagrams, etc.), were attached to make up a composite reference source. Unfortunately during this period the lighting control system developed some rather serious operational problems. Because the system was software controlled, the manufacturer had to be contracted to perform a system service including a software update. Inasmuch as this system update would change the operating functions and procedures, and inasmuch as the system update was not due to be performed until sometime after the period of this project, the manual was temporarily finalized at this status. Upon system update of the lighting control equipment, the manual will have to be updated also.

In the area of sound equipment, the quantity and variety of equipment was much greater. All of the available manufacturer's material was gathered into binders and copies were made. For this equipment, my intention was to construct separate laboratory exercises which would from time to time reference some of the information provided in these binders of manufacturer's materials.

My objective in treating the sound equipment was to devise manuals and exercises which would enable the student to learn about the various pieces of equipment individually while at the same time understanding how each item relates to others within the system. This is especially important in the area of sound equipment because the student will most often encounter sound systems made up of discrete components which are flexibly interconnected to form a complete operating system. In order for the laboratory exercises to accomplish this objective, a format different from that used for the lighting equipment had to be selected, one which would include a special section on inter-relationships.

The format of each exercise was then devised. It consisted of:

(a) A description of the particular item of equipment
(b) A description of the way in which this piece of equipment related to other pieces it might be used with
(c) Operational procedures for the item of equipment (with reference to its "Owner's" manual)
(d) Procedural descriptions for certain techniques directly pertaining to its useage in theatrical situations
(e) Review questions
(f) A list of competencies which should have been learned by the exercise.

EVALUATIONS

During the course of the project, the materials produced were subjected to developmental evaluations. Certain students in the regularly scheduled theatre production laboratory were given copies of the exercises to be used while they were learning to use the lighting and sound equipment.

The exercises were found to be helpful not only in learning to understand the equipment but also in learning certain theatrical techniques. These evaluations, helpful though they were, were not definitive. The circumstances of the production environment and schedule required that the students receive considerable personal instruction with the equipment at the same time, thus diluting the effect of the exercises. More controlled evaluation and implementation needs to be accomplished. This was planned for the 1978-79 academic year using the lighting and sound classes and production laboratories. This was not undertaken, however, as I left the University on academic leave at that time.

IMPLICATIONS OF THE PROJECT

The main implications which I can draw from the project are:

1. That there is a need for regularly scheduled laboratory time directly connected to the lighting and sound classes

2. That there is a need to make the laboratory exercises less tied to specific items of equipment and more generic in nature

3. That there is a need to restructure the syllabus for lighting and sound courses which will take into account the benefits of the laboratory work

4. That there will need to be personal supervision of laboratory work to some extent if the concept of technique is to be taught effectively.

There is a need for regularly scheduled laboratory time directly connected to the lighting and sound classes. The current departmental course entitled "Production Lab" is too involved in the concerns of mounting the public performances to allow for the slower and more studied pace required by the type of laboratory exercises envisioned by this project. If a specified time is reserved and specified objectives stated, the laboratory exercise concept will work much better than on a "do it when you can" basis. Furthermore, the lecturer can then depend on the students having covered the laboratory materials as assigned.

There is a need for laboratory exercises to be generic in nature rather than being tied too closely to specific items of equipment. In working on the project, probably the most frustrating thing was that the equipment base kept changing — new equipment arriving, old equipment being reassigned,

some equipment needing servicing, some equipment being unserviceable. In order for the laboratory exercise concept to be must fruitful such occurrences should not hamper the laboratory situation. For example, rather than describing a laboratory exercise in terms of a certain manufacturer's tape recorder, it must be described in terms of tape recorders in general. This requires that the student may have to rely on the "Owner's Manual" to explain the peculiarities of the particular tape recorder that he is using in the laboratory, but the laboratory exercise will not be invalidated if he has to change tape recorders at the last minute. If the laboratory exercise is designed with care, the student will not need to refer to the "Owner's Manual" often.

There will be a need to restructure the syllabus for lighting and sound courses in order to take into account the benefits of laboratory work. This should help to streamline classroom lectures. The operational procedures and special techniques which the student should learn in the laboratory are the very things which are so difficult to explain (and time consuming) in the classroom. This information can be superseded by more information on how the laboratory experiences relate to the theory and practice of actual production.

There will need to be personal supervision to some extent if the concept of technique is to be effectively taught in the laboratory. Although many of the exercises which the student will perform can be satisfactorily accomplished without supervision, those requiring development of fine technique will require dynamic feedback. This is perhaps axiomatic and should be planned for in the development of a laboratory program. The development of technique is, of course, a continual process but it is important to ensure that the student develop a correct technique approach from the very beginning, which may be the laboratory situation.

CONCLUSION

I found, in working on the project, a definite confirmation of its need. In trying to develop my attack on the project, I found that there was no established guideline available in the field of technical theatre. Most technical theatre classes devoted quite a bit of their time to the task of explaining in words that which is much better demonstrated in the laboratory situation.

I soon discovered that, within the time-frame of the project, I could only hope to establish pilot laboratory exercises. The permutations and combinations of all the equipment used in theatrical lighting and sound demand that selectivity be practiced. This, however, resulted in economics of scale. The form and content of developed models must be evaluated before mass production begins. A significant disappointment was that I did not have the opportunity to properly evaluate the project models in the context of a semester's classes. It was most beneficial, however, to have developed the above stated implications at a time when this Department was undergoing a radical restructuring of its technical theatre curriculum.

follow-up observation. Since completing the project, I have myself enrolled in an undergraduate class in media electronics taught in an electronics engineering department. As part of the class requirements I had to complete a rather rigorous laboratory section. As a result I now have a better perspective on the question of what constitutes a well designed laboratory experience. When I begin further work on laboratory manuals for technical theatre, I will approach it somewhat differently. The laboratory exercises need to be more simplified and direct in style (less lecture-like) and must more positively encourage individual investigation, mindful, however, of the need to accomplish stated objectives.

SYSTEMATIZATION OF INSTRUCTION IN THE INTRODUCTORY EDUCATIONAL RESEARCH COURSE

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Educational Research (EDRS) 7521 is a graduate level introductory course in educational research methodology. It is used by most departments in the College of Education to meet the research component requirements for Masters Degree students. Doctoral level students are generally required to take this course as a prerequisite to more advanced courses in research methodology and statistics. EDRS 7521 is a multi-section course taught by as many as five different instructors in one semester. Prior to this project, each instructor had his own objectives, desired outcomes and instructional strategies. In spite of repeated attempts by faculty to reach consensus on what the course should contain or achieve, there had been only minimum agreement on goals or expected outcomes.

DESIRED CONDITION

Faculty members responsible for teaching EDRS 7521 were desirous of rectifying the state of disarray described above. The authors believed that it was necessary to analyze the content, objectives, and methods employed with an eye toward providing a cohesive, logically sequenced course offering across faculty for all students. Past attempts to effect this transformation had failed for several reasons. Most notable among these was the absence of a firm commitment by faculty members to cooperate in critically examining their own and their colleagues' instructional objectives and strategies. The authors proposed to provide the initiative for a department-wide restructuring of the course by setting an example of teamwork in planning and course execution.

The authors envisioned the project as involving cooperative teaching rather than team teaching although the latter might be used at times. The project required six major phases with a seventh for dissemination of results among other departmental faculty and those interested persons both within and without the College and University. These major phases were:

1. Description and agreement on a common content base and course texts
2. Determination of a common set of course goals and objectives
3. Development of a variety of common instructional materials and strategies to be used in achieving course objectives
4. Creation of a cooperative test base utilizing both traditional and innovative testing procedures and including both norm and criterion-referenced tests

5. Implementation of the above in course sections taught by the instructors during the 1977-78 academic year
6. Formative evaluation of content, objectives, materials, strategies and testing procedures.

It was apparent that completion of the scope of work outlined in the preceeding paragraph would be costly in terms of the authors' time. Hence, funds were requested to support one graduate student for a period of 35 weeks (grand total $1,050). The graduate student selected was familiar with the course in question, interested in working with curriculum and instructional materials, and possessed the required computer skills for monitoring, maintaining and revising computer files as well as writing specialty programs as needed. In short, the student fulfilled the main support function in handling the more routine aspects of our plan, thus freeing the authors to deal with higher level developmental tasks.

WORK ACCOMPLISHED

The purposes of the project were largely fulfilled. A common content base was agreed upon, and a set of common course objectives was developed and revised after field testing. A variety of common instructional materials and strategies were devised and subjected to pilot trials. A computerized cooperative test base, consisting of both norm-referenced and criterion-referenced items, was created and somewhat expanded after a full semester's experience. The authors believe that the revised list of objectives and test items will serve the needs of the course for the next several years, provided periodical re-evaluation is maintained.

While a number of frustrating problems were encountered in the course of its development, the self-paced CAI (Computer Assisted Instruction) program for students to use in learning to build data files and SPSS (Statistical Package for the Social Sciences) Command Files has been completed and is ready for field testing by students. This phase of the project cannot be finalized until sufficient student feedback has been received concerning those portions of the program that may need correction, revision or resequencing.

The authors believe that the project has been invaluable in giving impetus to needed changes in a course that is so essential to many programs in the College of Education at Memphis State University.

AN ANALYSIS OF "PERSONAL FINANCIAL PLANNING" AS A NEW MAJOR[1]

Robert T. Daigler, Department of Finance, Insurance, and Real Estate

The purpose of this report is to discuss the feasibility, desirability and problems involved in creating a new major entitled "Personal Financial Planning" (P.F.P.) within a Finance Department. The uniqueness of this topic in the academic world naturally leads to a number of curriculum, staffing, and supply and demand questions; these questions will be outlined shortly and then discussed in some detail. However, before analyzing the problems related to a major in P.F.P., the nature of this topic needs to be determined.

THE CONCEPT OF PERSONAL FINANCIAL PLANNING

Personal Financial Planning is a catch-phrase that emerged several years ago from the various segments of the financial services industry. The inter-relationship of the various financial services (e.g., securities, insurance, real estate, tax planning, and tax shelters), especially as evidenced via the common thread of limited capital and portfolio effects, convinced many leaders in these areas that a coordinated overall financial plan would be beneficial to the consumer. A major benefit of such a coordinated financial plan would be to eliminate the practice of each segment

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[1]The author would like to thank the following individuals for their helpful comments and clarification of the issues involved in this report:

Mr. Olin Atkins, Associate Vice-President, Middle Atlantic Region, Dean Witter Reynolds.

Mr. Morelle Elliot, President, Memphis Chapter of the International Association of Financial Planners; Account Executive Dean Witter Reynolds, Memphis.

Mr. Edwin Gatewood, President, Oakland Financial, Charlottesville, Virginia.

Dr. Robert Harrill, Oakland Financial, Aptos, California.

Mr. Roland Hudson, Director of Academics, College of Financial Planning.

The author would also like to thank Dr. Stephen Hogan for helpful suggestions and comments.

of the financial services industry attempting to maximize the customer's investment in its particular service. The maximization approach was not considered optimal and was not well received by the consumer, for several reasons: (1) the consumer was unsure of the true advantages and disadvantages of the service, and was suspicious of the motives of the salesperson of that particular service, since the salesperson could be biased due to his limited perspective and the commissions involved; (2) a frustration on the part of the individual, who was being bombarded by many specialists for his attention and money; and (3) the individual had a given limited financial base, which suggested a simultaneous examination of all alternatives in order to determine the appropriate balance.

Personal Financial Planning has developed into three overlapping, but distinguishable, subfields. The subfield that has received a substantial amount of publicity is personal financial planning by specialists for a fee. This service is aimed at upper-middle-class and upper-class individuals with discretionary funds and complicated financial affairs; in particular, tax planning and/or tax shelters often are a critical part of the analysis[1] (Richlefs, 1977, 1978). Such individuals include financial executives, doctors, lawyers, dentists, and other professionals. It is generally believed that only a fraction of these individuals currently receive competent financial planning advice[2] (Immel, 1977; Richlefs, 1977, 1978).

The second subfield of P.F.P. is financial planning by a professional in one of the financial services areas, such as, the securities industry or the insurance industry. Unlike the fee oriented financial planner discussed above, these individuals do not receive a fee for their services because of the commission obtained for selling products (securities, insurance). Often these commission-based financial planners are less knowledgeable about detailed aspects of P.F.P. outside their own field, especially in the areas of tax planning and tax shelters. However, they often align themselves with lawyers or experts in the home office who are knowledgeable in these fields. According to Robert Lau (1977) Vice-President for Thomas McKinnon Securities, "The financial planner/registered representative is a generalist .. and is an expert on gathering data on his clients and recognizing their personal financial needs. He has a broad general knowledge of the techniques and products that are available to him. He knows how to recognize which experts need to be consulted and he is quick to refer his clients to them." The trend toward more comprehensive financial planning rather than simply sales of a given product line will affect the greatest number of customers and potential financial planners through commission-based financial planning.

The vast majority of individuals currently entering the financial services

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[1]Telephone interview with Dr. Robert Harrill, Oakland Financial Group, Aptos, California.

[2]Telephone interview with Roland Hudson, Director of Academics, College for Financial Planning, Denver, Colorado.

areas possess a college degree, often with extensive background or a major in one of the functional areas of business. The trend in the securities, insurance, and trust management areas toward financial planning will affect a great number of future business students.

A third aspect of financial planning has recently gained considerable attention in California, New York, and New England. Such individuals, who may need help in budgeting and planning their expenses, also receive advice on insurance, home ownership, retirement plans and perhaps even the risks and returns of various types of investment vehicles. Although such financial planning differs in scope from the planning needed for professionals, such advice is needed by a substantial number of individuals. Currently, some M.B.A. graduates (as well as almost anyone who claims to have knowledge of the various aspects of the financial system) are calling themselves P.F.P.'s and are consulting with individuals privately and in day long "Financial Seminars." This is particularly evident in California and the Northeast. However, these "Financial Planners" often have little precise knowledge concerning topics covered in these seminars.

Based on the above discussion, each of the three subfields of P.F.P. shows merit as a service to the client, will likely expand its coverage because of demand, and currently has an insufficient number of qualified professionals to service adequately those who need competent financial planning. The remainder of this article explores the advantages and disadvantages of Personal Financial Planning as a major.

OVERVIEW OF THE PROBLEMS

Examination of the concept of personal financial planning involves several focal points that are related to the desirability of P.F.P. as a major. One area of interest relates to current academic programs and professional organizations associated with personal financial planning. In addition, certain questions should be addressed, such as: what is the current academic and professional background of a financial planner? What background would be beneficial?

Assuming that an academic background would aid a financial planner, a second area of interest is the appropriate curriculum that would constitute a major in Personal Financial Planning. In fact, the number and scope of new courses needed, and requirements for new staff necessary to make such a program function properly, are two critical areas that must be examined carefully.

A third area is supply and demand estimates concerning job openings and the number of students interested in the field. Such information would help justify the need and feasibility for such a program.

PROGRAMS AND PROFESSIONAL ORGANIZATIONS

According to Roland Hudson, Director of the College for Financial Planning, Denver, several schools have expressed an interest in starting a program in Personal Financial Planning. However, the extent of academic interest in P.F.P. has not been determined.

In contrast, the interest in financial planning in the professional world has reached dramatic proportions. One gauge of this interest is the enrollment in the College for Financial Planning, a self-study program based in Denver. To date, that institution has graduated 1,000 individuals, and currently has 4,500 additional students enrolled in its program, with 3,500 of these actively pursuing the self-study sequence. During 1977 a total of 1,800 new students enrolled, and the first quarter of 1978 found another 1,300 enrollees according to Roland Hudson and Robert Harrill. Upon completion of the program the student is awarded the designation "Certified Financial Planner" (C.F.P.), a title that has received almost universal acceptance by professionals in the various financial services field. Seventy-eight per cent of the C.F.P.'s possess Bachelor's degrees and thirteen per cent have received graduate degrees (Knodell, 1977).

The College for Financial Planning offers five self-study courses, each equivalent to 3 to 6 hour academic offerings. The topics covered include personal finance concepts, investments, insurance, taxes, tax shelters, estate planning and trusts, and a coordinated case study approach to financial planning. Study groups and lectures are available in many of the major urban areas. Two examinations are given in association with each course; these examinations are offered at the NASD (National Association of Securities Dealers) examining centers. Upon completion of the program, the C.F.P. is expected to complete a designated number of "continuing education credits" during each subsequent five year period in order to keep his C.F.P. designation.

Recently the College for Financial Planning received accreditation to award B.B.A. and M.B.A. degrees under the University of London system. The London system allows credit for previous academic studies and work experience. Evaluation of a student's record and experience is made, and deficiencies in the student's background may be rectified by successfully completing the appropriate academic courses or by successful completion of a standardized examination after appropriate self-study.

Another indication of the national interest in financial planning is seen by the success of the International Association of Financial Planners, based in Atlanta. This organization publishes The Financial Planner, which is in its seventh volume, as of 1978. In addition, an annual convention is held. Also, a new organization is the Society of Independent Financial Advisors, based in Fort Worth.

Local interest in financial planning can be partially determined by the existence of a local chapter of the International Association of Financial Planners. The IAFP has chapters in 51 cities, with some of the chapters having over 100 members. Total enrollment is 3,500 members as of June, 1977, according to The Financial Planner.

CURRICULUM

A major in Personal Financial Planning would require a curriculum that possessed sufficient breadth such that the student would be exposed to the various aspects of financial planning. If a student desired additional

depth in one or more of the areas encompassed by P.F.P., then he could complete such courses as electives.

A suggested curriculum for a P.F.P. major is given below, with a discussion following.

Degree: Bachelor of Business Administration
Major: Personal Financial Planning
Required courses for the degree: All courses required by the University and College for the B.B.A. degree, as listed on p. 59-60 of the 1978-1979 Bulletin.

Required courses for the major:

Existing courses

FIR 3310: Real Estate
FIR 3710: Investments
FIR 3810: Principles of Risk and Insurance
FIR 4011: Law of Taxation and Planning of Estates

New courses

ACCT 3---: Personal and Managerial Tax
FIR 3---: Financial Statement Analysis
FIR 4---: Advanced Personal Finance
FIR 4---: Cases in Personal Finance

ACCT 3---: Personal and Managerial Tax (prerequisite: ACCT 2020) would be offered by the Accountancy Department for non-accounting majors.[1] This course would have a different emphasis than the tax courses usually offered by the Accounting Department. In particular, Personal and Managerial Tax would examine the major tax aspects related to both personal and managerial decision making. Although the major tax laws would be examined, the emphasis would involve tax planning rather than an in-depth analysis of the details of the tax law. The managerial aspects of tax planning would be relevant to P.F.P. since many of the problems for the individual are directly related to his business ventures. In addition, this course would benefit majors in other disciplines, in particular Finance and Management. An example of an appropriate text is An Introduction to Taxation by Sommerfield, Anderson and Brock.

FIR 3---: Financial Statement Analysis (prerequisite: Principles of Accounting 2020 and Business Finance 3410) would examine the effects of various accounting procedures on income and balance sheets. This course would

[1] Professor James Thompson, Chairman of Accountancy, indicates that he will have the staff within two years to offer this course and would be willing to offer the course.

examine the concepts and decision making aspects involved in accounting procedures without delving heavily into the numerical manipulation of such data. Concepts, case studies, and effects of accounting changes would be emphasized. Several commentators on financial planning (Disterdick, 1977) have indicated that financial statement analysis is crucial in determining the business and personal status of a client. An appropriate text would be Corporate Financial Reporting: Text and Cases by Hawkins. This course would also be appropriate for majors in other disciplines, in particular Finance and Management.

FIR 4---: Advanced Personal Finance (prerequisites: Real Estate 3310, Investments 3710, Insurance 3810, Personal and Managerial Tax) would be the capstone lecture course involving topics in Personal Financial Planning. Approximately one-half of the course should involve tax-shelters, an important topic that is not normally covered in any other course in a College of Business. The remainder of the course would cover other topics relevant to financial planning that are not examined in other courses, topics that need to be covered in more depth, and new developments in that area. For example, the course should include an in-depth discussion concerning individual preferences, as well as factors affecting decision making. See (Taylor, 1975) for an excellent review article.

FIR 4---: Cases in Personal Finance (prerequisites: Law of Taxation and Planning of Estates; Financial Statement Analysis; Advanced Personal Finance) would employ an integrated case approach to personal financial planning. Given the complex and interrelated nature of financial planning, a case approach that examines actual problem areas and emphasized the complexity of an individual analysis is crucial for the proper integration of knowledge in this area. The program sponsored by the College for Financial Planning realizes the importance of case analysis and recently has expanded its emphasis involving cases. Moreover, C.F.P.'s generally acknowledge the importance of cases. In addition, this course would allow class discussions concerning various aspects of P.F.P., as well as speakers from various financial services to enlighten the student concerning current developments in the speaker's specialty.

Students should be encouraged to seek depth in one or more of the above areas by taking advanced courses in investments, accounting and tax, real estate, and/or insurance. Students should also be advised as to the benefits of an advanced degree of additional courses in either Business (Finance or Tax) or Law.

Finally, note that FIR 2220, Personal Finance, is neither required for the major nor required as a prerequisite to any of the courses in the major, since most of the material covered in this courses is discussed in more depth in other courses. However, a student may take FIR 2220 for credit toward the B.B.A. degree, as long as the student has not completed FIR 3710-Investments or FIR 3810-Insurance for credit.

BENEFITS OF A P.F.P. MAJOR TO STUDENTS

The benefits of a major in P.F.P. for students interested in each of the three areas discussed above are:

1. Fee-based financial planning for high-income individuals: a student with an undergraduate degree in P.F.P. would possess the academic background necessary for this type of financial planning, either by himself or as a member of a consulting group. However, one or more of the following, in conjunction with the major in P.F.P., would probably be needed for maximum success:

   (a) An advanced degree or certification, such as J.D., C.P.A., or perhaps M.B.A., in order to obtain in-depth knowledge concerning tax planning and tax shelters.

   (b) A C.F.P. designation would be beneficial; a student with a major in P.F.P. should be able to pass these examinations with some additional work.

   (c) Experience.

2. Commission-based financial planning: a student majoring in P.F.P. would have an excellent chance of success in this area and generally would have adequate background for the job. Besides the P.F.P. major a student should:

   (a) Obtain training and/or electives in their area of specialization (i.e., securities, insurance).

   (b) Sales experience would be beneficial.

   (c) A C.F.P. designation would be helpful.

   (d) Experience.

3. Financial planning for middle and lower income individuals: Students with a major in P.F.P. would have an excellent background to participate in this area of individual financial planning. It may seem that the student would be overqualified for this type of endeavor; however, M.B.A. students are currently providing this service in many areas of the country. A student with a major in P.F.P. would, in general, be more qualified than an M.B.A. graduate to give such advice. Experience in this area may be a steppingstone to fee-based or commission-based financial planning.

EFFECT ON STAFFING AND CREDIT HOUR PRODUCTION

The additional staffing requirements necessary to implement a new major in P.F.P. include faculty to teach Financial Statement Analysis, Advanced Personal Finance, and Cases in Personal Finance. The Financial Statement Analysis course could be taught by a faculty member with a major area in Finance and a minor area in Accounting. Such a faculty member could be obtained as

part of the expected additional staffing requirements for Finance during the next several years. An accountant could teach Financial Statement; however, the approach usually employed in this course requires the instructor to blend Accounting, Finance, and decision-making aspects of financial statement analysis, an approach more compatible with the background of finance faculty.

Ideally, the two courses in Personal Finance (Advanced and Cases) should be taught by an individual who specializes in this area. Hiring a staff member who possesses a Ph.D. with a major field in Personal Finance may be a difficult undertaking for the near term. However, as academic interest in this area grows, this difficulty should be alleviated. In the meantime, professionals in the area of P.F.P. could be hired on a part-time basis to teach these specific courses. In particular, tax shelters could be taught by one of the practicing attorneys who specialize in this field. The logical part-time instructor for the case course would be an attorney who specializes in financial planning. Such individuals would possess the appropriate academic and professional background and would have an academic background superior to other P.F.P.'s.

The effect of a program in P.F.P. on FIR credit hour production is uncertain. Student interest currently is unknown. Table 1 approximates the effect on FIR credit hour production for various numbers of majors. The figures in Table 1 are overestimated to the extent that some students selecting P.F.P. as a major would take the FIR courses currently in the curriculum even if a P.F.P. major is not implemented. However, this effect should be relatively small. Moreover, any such overestimation should be more than compensated for by additional credit hours produced by P.F.P. majors taking free electives within the FIR Department. (Students will be encouraged to take some of their free electives within FIR to increase the depth of their knowledge in one or more areas of financial planning.)

Table 1 implies that a minimum of 10 to 15 majors per year would be needed to justify the additional courses required for the major. The current interest in P.F.P. in the financial community plus the uniqueness of the program should generate students both from our traditional student base and from the group of professionals working in the area who wish to earn a degree or improve their knowledge of financial planning (Table 1 on next page).

One benefit of the proposed program in terms of staffing and credit hour production is that few additional courses/sections would need to be offered in order to accommodate the major in P.F.P. Specifically, the new courses, as proposed under the curriculum section, would have to be taught only once a year, unless the number of majors became large. Moreover, the other courses in the major (FIR 3310, Real Estate; FIR 3710, Investments; FIR 3810, Insurance; FIR 4011, Taxation and Estates) currently could accept additional students without having to offer additional sections.

Thus, a P.F.P. program that generated 30 majors per year would increase the FIR Credit Hour Production by 630 (or 7 1/2%) while only requiring

Table 1

Effect of Personal Financial Planning Major
On FIR Credit Hour Production, Per Year

No. of Full-Time Equivalent Majors Per Year	Increase in FIR Credit Hour Production	Yearly % Increase Over Current FIR Credit Hour Production	Additional FIR Sections Per Year Needed to Support Major
10	210	2 1/2%	3
20	420	5 %	3
30	630	7 1/2%	3
40	840	10 %	4
50	1,050	12 1/2%	5

that three additional sections (courses) be taught per year (1/2 of a faculty position). Also, at least at the beginning of the program, two of these three courses could be taught by a part-time instructor who is a professional financial planner. (Part-time salaries are substantially below equivalent per-section full-time salaries.)

MAJOR VS. CONCENTRATION

Personal Financial Planning could be designated as a separate major within the FIR Department or become a new concentration under either the Finance, Real Estate or Insurance majors. State Board of Regents and Tennessee Higher Education Commission guidelines do not distinguish between a major and a concentration; thus, it is assumed that the College may make this decision.

Confusion over the characteristics of a "major" versus a "concentration" is also evident by examining the concentrations within the Management and Marketing Departments. The Management degree has five separate concentrations; however, only one course (Human Relations in Organizations) is required for each of the five concentrations. On the other hand, Marketing requires the same four courses for each of the five Marketing concentrations which are available. Hence, Management and Marketing chose completely different approaches to implement their areas of concentration. The Marketing "concentration" procedure follows the traditional view of requiring a core of courses for all of its majors. The approach of the Management Department is more difficult to rationalize, but examination of their concentrations (General Management, Personnel, Production, Quantitative Methods, and Manpower) indicate that separate majors may be inappropriate since the required courses for each concentration fall under the broad area recognized

as Management. Quantitative Methods may be an exception to this rule.

The basic advantage of making P.F.P. a concentration within one of the majors in the FIR Department would be to speed the process of program approval, since the program would not have to go to the Tennessee Higher Education Commission. (New concentrations go through the State Board of Regents; new major requests must go to the Tennessee Higher Education Commission.) However, several factors in favor of a new major in Personal Financial Planning would seem to outweigh the one disadvantage. Specifically, (1) the uniqueness of the P.F.P. major would be an asset that the College and University could promote; (2) students would more likely be attracted to a new major than to a new concentration; (3) the underlying theme of P.F.P. spans across Finance, Insurance, Real Estate and Taxation, without being closely associated with any one area; only one course from each of the FIR majors is required in the program; and (4) the faculty within each of the segments of the FIR Department may be wary of a P.F.P. concentration within their area, since they see little relationship, between, for example, Business Finance and Personal Financial Planning.

MINOR IN PERSONAL FINANCIAL PLANNING

Each of the major areas in the College of Business allows a 21-hour minor for students outside the College of Business and a 9-hour minor for students inside the College. The following sequence of courses would be appropriate for a minor in Personal Financial Planning.

Minor for students outside the College of Business:

ACCT 2010-2020:	Principles of Accounting
ECON 2110:	Macroeconomics
ACCT 3---:	Personal and Managerial Tax
FIR 3310:	Real Estate
FIR 3710:	Investments
FIR 3810:	Insurance

Minor for students within the College of Business: Three of the following:

ACCT 3---:	Personal and Managerial Tax
FIR 3310:	Real Estate
FIR 3710:	Investments
FIR 3810:	Insurance

(NOTE: If one of these courses is required for a student's major, then that course may not apply toward the minor.)

STUDENT SUPPLY AND DEMAND

The interest of college students for a program in P.F.P. has not been documented. A survey of students could help alleviate this problem.

Since opportunities for jobs exist in the financial world (see below), students should be interested in the area. Moreover, professionals in the field may wish to receive a degree or obtain more knowledge in a given area.

The demand for qualified individuals seems to exist in all three areas of P.F.P., namely for fee-based, commission-based, and lower income financial planning. However, no studies have been completed to pinpoint the exact demand for the present or the future. Part of the problem in determining demand is that it is difficult to survey the extent of fee-based professionals engaging in comprehensive P.F.P. since this service is usually involved with individuals. Only occasionally is a fee-based P.F.P. associated with a large organization. However, some large organizations have moved into this field. For example, Dean Witter, Reynolds; Merrill Lynch, Pierce, Fenner, and Smith; American Express; City National Bank; and John Hancock Mutual Life Insurance Company (Disterdick, 1977; Richlefs, 1978). Professionals and executives are realizing the need for comprehensive planning and more realistic analysis of the risks and returns of alternative investments. In fact, many companies provide P.F.P. as a fringe benefit to the executives (Richlefs, 1977). Thus, both specialists in tax planning and tax shelters, and comprehensive P.F.P.'s are needed to advise these individuals. As the concept of financial planning continues to gain acceptance among professionals, fee-based P.F.P. for high income individuals should expand rapidly.

Commission-based financial services provided by brokerage houses, banks, and insurance companies also have substantial job opportunities, since they have moved rapidly during the past few years toward financial planning (Catalano, 1977; Lau, 1977). In particular, according to Emile Knodell (1977), "Many brokers believe Wall Street to be in a period of transition. Gradually emphasis is changing from individual product sales to overall financial planning." Knodell continues, according to Thomas Jenkins, Vice-President of the Cleveland office of Hornblower, Weeks, Noyes and Trask, "A young person coming into this business can no longer make a living selling GM and ATT. The future lies in generalization. Most specialists fail when the game is over .. the only course left is for the securities industry to adapt and change by involving itself with financial planning instead of investment sales." According to J. C. Bloom, Western Regions Supervisor of Personal Management for E. F. Hutton's Kansas City, Missouri, office, "Many firms, like my own, are recognizing the potential for growth and client service the financial planning concept offers. In my opinion, those firms and individuals who prepare for it will be the future leaders in our industry." The emphasis on a more comprehensive analysis of a customer's financial situation puts a P.F.P. at an advantage over a specialist in a given area. For example, brokerage houses such as Dean Witter Reynolds, Inc., place a great deal of emphasis on the P.F.P. approach (Lau, 1977). Other advocates of P.F.P. include: Richard Norris, Vice-President, Shearson Hayden Stone, Inc.; Ruth G. Adler, Vice-President, A. G. Edwards and Sons, Inc.; J. C. Bloom, Western Regions Supervisor Personal Financial Management, E. F. Hutton; Thomas Jenkins, Vice-President, Hornblower, Weeks, Noyes and Trask, Inc.; Herman W. Yursman, President, Alpha-Omega Planning Corporation; Robert Lau, Jr., Vice-President, Thompson McKinnon Securities, Inc. (Knodell, 1977).

Finally, opportunities for qualified individuals in financial planning involving middle and lower income individuals are, according to Roland Hudson and a number of other people at the forefront of P.F.P., "virtually unlimited." In the view of Robert Harrill, "Everyone needs some type of financial planning. The problem is to match individual needs to planning services at a reasonable cost. To date, because of the highly individualized nature of financial planning and the opportunities available, we have concentrated on the higher-income bracketed individual." Currently in California many individuals (with and without adequate financial planning background) are "hanging out a shingle" and advising middle to lower income individuals (often via seminars) how to manage their money. Also, some corporations now are providing financial planning seminars to all of their employees (Immel, 1977).

In conclusion, it seems evident that opportunities exist in the area of P.F.P. such that qualified individuals may obtain jobs in commission-related financial services or in fee-related financial counseling. Moreover, opportunities exist in P.F.P. to advise middle income individuals. However, to achieve competency and status, an individual interested in fee-related counseling for high income individuals probably should obtain an advanced degree in Accounting, Finance, or Law.

CONCLUSION

The concept of Personal Financial Planning has taken a strong foothold in the financial services industry. The breadth required of a financial planner necessitates course work that is substantially different than a typical major in Finance, Insurance, Real Estate, or Accounting. Given the opportunities available in the financial world for competent personal financial planners, students with an appropriate academic background should have quick access to the top level jobs in this area.

RECOMMENDATIONS

The main unanswered question which is evident from the above discussion is the number of students at Memphis State University who would be interested in majoring in P.F.P. Although some interest in the major and/or courses would be generated by the professional community, the majority of students should come from the traditional student body in the College of Business. However, high school, community college, or transfer students who are specific-goal oriented and have a definite interest in P.F.P. may choose MSU over other schools, given the uniqueness of the P.F.P. program. A more specific idea of the potential number of students who would be interested in a program in P.F.P. could be obtained by taking a survey of the students enrolled in MGMT 1010 (Introduction to Business) during the 1977-78 academic year. Such a survey should provide a rough estimate of the feasibility of pursuing a major in P.F.P. Note that the number of interested students would have to be doubled to estimate the interest of Freshmen Business majors, since students may take MGMT

1010 in either the fall or the spring, or they may decide not to take the course. The concept of P.F.P. could be presented to each of the MGMT 1010 sections, including a description of the curriculum and the opportunities available. Questionnaires could be provided to determine the students' degree of interest and mailing address so that further information could be provided.

I recommend that, if student demand is adequate, then based upon the above information and impressions received from professionals in the financial services area, a proposal to offer a major in P.F.P. be completed and passed by the Department and College curriculum committees and by the FIR Department Chairman and Dean of the College of Business Administration. As part of the proposal, letters from various professionals and leaders in the P.F.P. field should be obtained to add credibility and purpose to the proposal.

Finally, I recommend that upon implementation of courses and a major in P.F.P. the professional P.F.P.'s in Memphis be informed about these courses and the degree availability of personal financial planning at Memphis State University. In addition, informing these individuals of the more advanced courses in investments, real estate, insurance and taxation at the undergraduate and graduate levels may interest professionals who possess the knowledge provided by the courses required for the P.F.P. major. In addition, mailing of this information would be good "advertising" for the program and would alert the financial services community to the potential superiority of MSU graduates in the financial planning area.

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PART II
VIDEO TECHNOLOGY IN INSTRUCTION

INSTRUCTIONAL AID (VIDEOTAPE) IN MARKETING RESEARCH COURSE 4080

Harry H. Elwell, Jr., Department of Marketing

Preliminary studies indicated that when students attempted to apply their knowledge of statistics in the Marketing Research Course, MKTG 4080, they were possibly confusing "levels of significance" with "ranges of accuracy." A request for a seed grant was made in March, 1977 to make a videotape of "Relating 'Range of Accuracy' to 'Level of Significance' when Determining Sample Size." The request was granted on April 19, 1977, and a 1976-77 budget was approved to cover student assistance (a graphic artist), stenographic services, and supplies (including videotapes). In addition to Dr. Harry Elwell as Project Director, three members of the Center for Instructional Service and Research assisted with the project. Mr. Kit Rushing was the Producer, Mr. Jimmie Mattson was the Director, and Ms. Susan Scarleski was in charge of graphics.

The tape was completed satisfactorily by July 12, 1977. Two copies were deposited with the Learning Media Center for use by students, faculty, and for loans to other universities and one copy was retained by the Project Director.

PROJECT SETTING

The setting within which the project was conducted was basically MKTG 4080, Marketing Research; however, the students in MKTG 7015, Research Methodology, also were involved. The part of the course, in which the TV tape was to apply, dealt with establishing sample sizes given differing values for "Level of Significance" and "Range of Accuracy" (or "Coefficient of Variation"). There were fourteen (14) students in the MKTG 4080 course and twelve (12) students in the MKTG 7015 course during the period of the study.

DESCRIPTION OF PROCEDURE FOLLOWED

The procedure followed was simple: calculations were made and slides were designed to show the relationship of "Level of Significance" to "Range of Accuracy." These slides were then first used as a guide to the class presentation of the information. From these "newer" presentations, an outline of the TV tape message was prepared. Then followed a preliminary writing of the TV tape script after which the script was reviewed by at least two other professors or practitioners in Marketing Research. From questions asked and comments made, the script was put into final form together with the slides selected for use. There followed timing of the script, selection of fill-in

shots from the laboratory library, and finally the actual shooting of the two-part TV tape.

Kit Rushing, the Producer, was most instrumental in the timing of the script and in selecting appropriate slides. He worked closely with Jimmie Mattson in the actual shooting of the tape and in editing the tape and slides for an integrated presentation. The resulting product was a two-part color videotape on the project topic, approximately 17 minutes and 10 minutes respectively, for a total length of just under 27 minutes.

EVALUATION RESULTS

An exact evaluation of the usage of the TV tape has not as yet been conducted. Professor Doddridge, another instructor who teaches MKTG 4080, had his second-term, summer 1977, students view the tape and the project director used the slides in his MKTG 7015 class. The results were subjectively evaluated as good.

By utilizing a "before-after" calculation, the average grade of 88 by those exposed to the tape or the slides was compared to the grade of 72 of previous students. Application of the "t" test to the grades gave a "t" value of 1.99875 — over the 95% confidence level.

A more appropriate test would be with an "after only with control group" design. Such a test would not leave the bias of alerting students to the test procedure until after it was made. The tape could be assigned for viewing. A test on the subject could be given and the results graded. After these steps, the professor could ask which students had viewed the tape as the experimental group and the students who had not viewed the tape as the control group. While this experiment has a weakness (in asking students who had viewed the tape), it is believed to be a better test than the calculation example shown in Appendix A. It is contemplated to utilize this design at a later time.

CONCLUSIONS AND FOLLOW-ON ACTIONS

First indications are that the project was successful. While efforts had been made previously to develop examples for the students on the project topic, it was not until the vigorous planning required to develop the TV tape that a sufficient number of sequential slides had been prepared so that the students could comprehend the significance of the topic.

Comments by students of Professors Doddridge and Elwell who viewed the tape were very favorable. The consensus was that the presentation is logical and easy to understand with none of the confusion of symbols that seems to plague many statistical processes.

A logical follow-on to the videotape on "'Level of Significance' related to 'Range of Accuracy' when determining Sample Size" would be a videotape

on "T Analyses." "T Analyses" are the statistical tests of significance which are applied to test the results of comparing a sample result to either another sample or to the population value. It is strongly urged that consideration be given to providing a seed grant for the development of a videotape on the topic of "T Analyses."

APPENDIX A

Comparison of Test Scores of Those Viewing TV Tape to Those Not Viewing TV Tape

Computed $\bar{X}$ of Those Viewing Tape = 88

$$\sigma_{\%_1} = \sqrt{\frac{(p)(q)}{N_s}} = \sqrt{\frac{(88)(12)}{25}}$$

$$= \sqrt{\frac{1056}{25}} = \sqrt{42.24}$$

$$= \underline{6.49923}$$

Computed $\bar{X}$ of Those Not Viewing Tape = 72

$$\sigma_{\%_2} = \sqrt{\frac{(p)(q)}{N_s}} = \sqrt{\frac{(72)(28)}{100}}$$

$$= \sqrt{\frac{2184}{100}} = \sqrt{21.84}$$

$$= \underline{4.67333}$$

$$\sigma_D = \sqrt{(\sigma_{\%_1})^2 + (\sigma_{\%_2})^2} = \sqrt{(42.24) + (21.84)}$$

$$= 64.08 = \underline{8.0050}$$

$$\text{"t"} = \frac{\%_{s_1} - \%_{s_2}}{\sigma_D} = \frac{88 - 72}{8.005}$$

$$= \frac{16}{8.005} = \underline{1.99875} \quad (95\% \text{ Confidence} = \text{approximately } \underline{1.98})$$

VIDEOTAPED VISUAL TRAINING IN DRIVER SAFETY

John R. Hirschmann, Jr., Department of Curriculum and Instruction

Driving a motor vehicle in today's traffic is a complex task involving both mental and physical skills. The driver is confronted by a changing environment both inside and outside his vehicle. To drive intelligently and safely demands not only that the driver be able to "see" all of his environment, but more important that he must be able to recognize the meaning or implication of each element within his total environment, and he must do this rapidly and accurately.

The defensive driver easily "sees" the elements of his traffic environment that are important and then adjusts his driving accordingly. For example, when a defensive driver "sees" a slow moving vehicle, he does not concern himself with the make, color or model of the other vehicle. Instead he sees it as an object to be passed. He is concerned with the positions of the vehicles in relation to other elements of the scene. Another example, a drive sees a vehicle with distinctive color, lights, or design such as an ambulance, police car or school bus. A perceptive driver will recognize these elements and adjust his driving to the situation even before he can read the lettering on the approaching vehicle. This advanced perception or awareness gives defensive drivers the time and space to quickly and safely adjust to the potential hazard or dangerous situation.

Research has indicated that drivers who are accident-repeaters or chronic traffic law violators may see very well. Vision tests, covering acuity and other visual skills, show these individuals to be normal in these skills, yet they seem to get into trouble more often than normal. This leads us to believe their perception is poor.

Perceptual ability may vary from time to time and may depend upon a number of factors, including previous experience or familiarity with the types of situations encountered. Improvement or perceptual ability can be accomplished by exposing the individual to a number of traffic experiences through the medium of visual aids, and teaching him to "read the scene" quickly and accurately. He can be taught to take in this large amount of information presented in his traffic environment and to make intelligent decisions by learning what to look for and how to look.

Several ideas have been used to develop Visual/Perceptual Training Programs. Some of the most comprehensive work in this field has been done by the Traffic Safety Center at Illinois State University. Their program is made up of a series of slides including digits, traffic signs, and traffic scenes. The slides with the digits and signs are flashed on the screen for a short time, approximately one-half second and the traffic scenes are shown for five seconds, then questions are asked.

This long, five second, period of time seems to be the weak link in this program. The student realizes that he will seldom have such a long time to examine the traffic scene. He knows that normally he is moving at a rate of 40 to 80 feet per second and this means he is being presented with an every changing scene. The use of the videotape should present the traffic scene in a more realistic manner. Students will be able to observe the the scene as it is developing for a 10 to 15 second period of time leading up to the cut off and the questions. Thus, he has seen the elements in a dynamic presentation of the videotape rather than having seen a static presentation of the slides.

PROCEDURES

A schedule of one hour taping sessions was established and at these scheduled times the traffic scenes as viewed over the shoulder of the driver were videotaped. These sessions were designed to tape traffic on-campus, in urban and suburban areas, in residential areas and on expressways. After several tapes were made, twenty scenes were selected and put together on a teaching tape. This tape included a visual presentation of the questions as well as an oral reading. This teaching tape is now being used in the driver education classes to reinforce perceptual training.

EVALUATION

Evaluation of the tape has been inconclusive at this time. Students generally prefer to view the tape over the slides, but too much concern over the location of the taping and identification of who is on the tape often overshadows the real purpose of the presentation. In-class evaluation will continue and other tapes will be developed from the extra footage that has been taped.

CONCLUSIONS AND RECOMMENDATIONS

Overall the project was a success. There are several technical details that may be improved for future tapings. For example, if a vehicle with right hand drive could be used, the camera could be held in the position of the eyes of the driver of a conventional vehicle and would result in fewer ears and thumbs showing on the tapes. Another possible improvement could be to use a convertible or even a pick-up truck and hold the camera over the head of the driver. The oral reading of the questions needs to be continued, since this helps to pace the program, but the rate of reading and the timing between questions needs some small changes.

FRENCH LANGUAGE REVIEW

Reginald A. Dalle, Lacy White, and Frank O. Brantley
Department of Foreign Languages

The French Language project was aimed at providing students in French adequate, efficient and professional help for reviewing the basic structural notions of grammar usually presented in a first semester French course. The project was also designed to help students who want to acquire in advance a grammatical insight before its formal class presentation. Because of the audio-visual program's accessibility in the library and also because of its structure (offering all the basics of French that a student should master during his first semester) any beginning French tutorial program can benefit from the project.

Twelve review grammar lessons were included in the initial program. These lessons follow any basic first semester program in French. This will permit the French Department to change the textbooks and methods of approach if so desired while still benefitting from this audio-visual program. In order to formulate tne program, the following textbooks were consulted:

Le Français, Langue et Culture by Rolland, O'Connor & Meyer
(presently used at Memphis State)
Beginning French by Hendrix & Meiden
Parole et Pensée by Lenard
French by Brown
Découverte et Création by Jian & Hester

The project was conducted in the following way. First, Dr. Reginald Dalle wrote the scripts (twelve lessons) which were reviewed and typed by the instructor, Miss Lacy White. The lessons were then returned to Dr. Dalle for editing before being submitted to the audio-visual center for producing, recording, and filming. The project was conducted in accordance with a goal chart set up by the Producer, Kit Rushing, and Director, Leslie E. Bailey. As Department chairman, Dr. Frank Brantley initiated the project and exercised general management and supervision of it.

Each of the twelve lessons followed the same pattern of presentation:

1. Presentation of the grammatical points of the lesson
2. Separate development of each point of grammar with examples providing space for the students to repeat examples
3. Summary of the points of grammar
4. Conclusion of the lesson.

OUTLINE OF THE LESSONS

Lesson I

1. Grammatical gender
2. Definite articles, le, la l', les
3. Indefinite article un, une, des
4. The verb etre

Lesson II

1. Negation
2. Adjectives
3. Possessive adjectives
4. The verb avoir

Lesson III

1. The verb aller
2. The form of questions in French
3. Contraction with the preposition "de" and "a"

Lesson IV

1. Regular French verbs
2. Present tense of regular verbs
3. The partitive article

Lesson V

1. Verbs pouvoir and vouloir
2. Personal direct object pronouns
3. Indefinite object pronoun "en"
4. Indefinite object pronoun "y"
5. Indefinite pronoun "le"

Lesson VI

1. Interrogative pronouns for persons
2. Interrogative pronouns for things
3. Interrogative pronouns for definite objects
4. Study of "ir" verbs in French

Lesson VII

1. The subjunctive
2. Its formation
3. Its use
4. Expressions followed by the subjunctive

Lesson VIII

1. The imperative
2. The indirect object pronouns
3. The position of object pronouns

Lesson IX

1. The past participle
2. The passé composé with être and avoir
3. The word order in the passé composé

Lesson X

1. Agreement of the past participle
2. The subjunctive in the past tense
3. The verb faire
4. The causative construction

Lesson XI

1. The imparfait
2. The use of the imparfait

Lesson XII

1. The reflexive verb
2. The reflexive pronouns
3. The verbs dire and écrire

Each lesson lasts 15 to 20 minutes. Each point of grammar is structured in such a way that the student may instantly choose the points of grammar he wishes to review.

EXTENSION TO SECOND SEMESTER FRENCH

The response to the first semester videotapes was sufficiently positive that it was desirable to extend the project to the second semester French course. Procedures used were similar to those used in the case of the first semester course. The final products of the project were 22 videotapes, each 15 to 20 minutes in length, which summarize the 25 lessons which make up the first and second semesters of Elementary French.

PART III
COMPUTER TECHNOLOGY IN INSTRUCTION

ADAPTATION OF TEACHING INFORMATION PROCESSING SYSTEM (TIPS) FOR USE IN DEVELOPMENTAL ENGLISH

H. Ramsey Fowler and John N. Furniss, Department of English

The purpose of this project was to set up, for use in developmental (remedial) English courses at Memphis State, a program employing computer-based instruction through the Teaching Information Processing System (TIPS). The project researchers believed that implementation of this innovative system would lead to substantial improvement in remedial instruction in basic composition courses. We felt that the introduction in developmental courses of precise criteria for measuring student performance would enable instructors to present students with accurate indices of performance in such courses in a manner which cannot be handled as efficiently under the procedure used to date. Additionally, it was suggested that computer-assisted testing, by freeing the instructor of developmental courses from much of the load involved in grading of weekly drill assignments, would allow more efficient use of contact hours with students themselves and, consequently better instruction.

PROJECT OBJECTIVES

The principal objectives of the research phase of the project were carried out during the summer term 1977. These objectives included the following: (1) designing of an entire program of test surveys to be employed in certain laboratory sections of English 1101 during the fall semester, 1977; (2) setting up diagnostic instruments whereby information generated by computer-based grading of the surveys could be subjected to meaningful analysis and could individualize instruction on a student-specific basis; and (3) establishing a computer program whereby the surveys given in these laboratory sections could utilize the resources of TIPS to provide computer-assisted instruction for students in special sections of English 1101. These objectives were met during the summer term, and plans were made at the end of that time to consult with qualified advisors to develop a statistical model for analysis of the data at such time as enough data on the project became available.

PROJECT IMPLEMENTATION

The course for which the project was designed, English 1101, has special sections which stress basic English skills and which are offered primarily for students who need remedial work in reading and writing and who score 16 or below on the ACT test. At the time of the project, classes in this special course met five hours per week for three hours credit. Two of the five class hours were designated as "laboratory" hours, and it was for this

segment of the course that computer-assisted instruction was sought. The work of the project in summer 1977 included the preparation of fourteen surveys for use in the specified laboratory sections during the fall semester. Thirteen of these were intended to be used as TIPS surveys, while one was designed only as an introductory survey, to be given during the first full week of classes while the computer base for the course was still being established. These surveys all followed the same format; each consisted of ten multiple-choice questions, with four choices to each item. The exercises were carefully chosen to avoid ambiguity and undue difficulty for the expected levels of performance.

In close conjunction with the work of preparing the surveys themselves was the preparation of remedial prescriptions to be used with the surveys. Following the establishment of a complete course syllabus for the English 1101 laboratory sections, keyed to the Grassroots workbook and the English Skills Handbook, specific learning objectives were drawn up for all units of the course and mastery levels were established on the basis of these objectives. Separate remedial prescriptions were then written for each unit, designed to treat as effectively as possible the problems in students' survey performance. The effectiveness of the prescriptions themselves were thoroughly tested during the fall semester of 1977.

Concurrently with the preparation of surveys and prescriptions, a program was developed and coded to enable the course surveys to interact with the TIPS computer program, already installed within the facilities of the Memphis State Computing Center. Prior to the opening of the summer term, John Furniss attended a workshop conducted at Duke University by Dr. Allen C. Kelley, originator of TIPS. This workshop provided highly useful background for the work of coding itself. Through this process, initialization data for the English 1101 course were translated to the computer format and were fully coded during the month of June. When this segment of the project was completed, with some assistance from personnel of the Computing Center, the data were keypunched, and simulations were run on the computer to approximate as closely as possible the conditions which would exist in the course itself. A fictitious class roll was prepared and fictitious survey results were entered to test the diagnostic capabilities of the program and to evaluate the usefulness of the proposed remedial prescriptions. The first successful tests of English 1101 data were run on the computer in the month of July.

In the fall semester of 1977, after the project work specifically funded by the Seed Grant had been completed, John Furniss tested the program developed under the grant in three sections of English 1101: Section 003 (lab section 203), Section 007 (lab section 207), and Section 012 (lab section 212). All three of these were special (developmental) sections of freshman English. In two of the classes (1101-003 and 1101-007), the instructor employed TIPS as a testing instrument in the laboratory portions, while in the third (1101-012) all quizzes were graded manually, without the assistance of the TIPS program.

The actual administration of TIPS in the classes designated for its use proceeded without any major difficulties. Enough simulations had been

run on the computer during the summer term that most problems could be anticipated or, if not, easily remedied. Thirteen TIPS surveys were given in all. The surveys were usually administered on Wednesdays, during the lab sessions, with results returned to the students at the regular sessions on Thursdays. No resistance was found, from the students, to the use of the computer grading process, and the few problems encountered in this respect were relatively minor. There was some initial difficulty, among a few students, with the reading of the printed student forms, but once they became accustomed to the format of the reports they seemed to react favorably. Although a clear preponderance of the students admitted (on a questionnaire given at the beginning of the semester) to unfavorable reactions to English courses, there was little open negative criticism and in fact only three students out of forty-seven withdrew during the term.

EVALUATION

The initial results of the research project, and of the work which followed, were generally quite favorable. The English 1101 course was initialized and entered on the computer and was run for a full semester in an actual course situation. There were fewer difficulties with the administration of the course than anticipated, and most of the problems that did arise were easily solved. Plans were therefore made for additional use of TIPS (and perhaps other systems) in the English Department, which had not previously made use of the computer in its instructional program.

Of course, the objective of developmental English is to compensate for a student's deficiencies in reading and writing skills by giving him or her the opportunity to receive intensive instruction in the fundemantals of basic writing. The underlying purpose of the TIPS project was to improve the quality of instruction, and therefore the quality of the students' composition, by making the teaching program more efficient. It is this aspect of the project that is most difficult to evaluate. The central problem in this regard is the necessarily subjective nature of evaluating any composition work. It is possible to demonstrate improvement over the course of a semester, in a student's composition work, but it is difficult, if not impossible, to substantiate the source of that improvement. In other words, a student's progress might result equally from effective conferencing and good annotation (on the part of the instructor) of the student's written work; it might have nothing to do with the weekly quiz surveys and grammar review. Nevertheless, some attempt is being made to document improvement under TIPS. Writing samples of the first and last written work for each student in the three classes taught by John Furniss in the fall of 1977 were transcribed and retained. Analysis of this material is in progress and may provide some indications of the TIPS program's effectiveness.

In a sense, then, this report is incomplete, since a definitive evaluation of the research project funded under the 1977-1978 Seed Grant Program cannot be fully undertaken until the TIPS program that was developed for English 1101 has been tested more fully. At such time, a great deal more information regarding the effectiveness of the program in basic composition courses will have been gathered, and it is hoped that data on the program will be sufficient to subject to statistical analysis. The results so far

however, indicate that there is a place for computer-based instruction in developmental English courses and that its use can be beneficial to students as well as instructors. This project represented the first time that the English Department had employed computer-based instruction in any of its courses. The potential demonstrated by its use in 1977, it is hoped, will lead to additional use of the computer, in developmental English, in the future.

The project researchers would like to thank Dr. G. Douglas Mayo and the Center for Instructional Service and Research for their generous support in making this project possible, as well as Dr. Walter Smith, Dean of the College of Arts and Sciences, and Dr. William Osborne, Chairman of the English Department, for their encouragement and support of the effort. Special thanks are also due to Ms. Pamala Morrison of the English Department's graduate assistant staff, for her able and enthusiastic assistance with research and survey preparation, and Dr. David Ciscel of the Department of Economics, whose expert technical advice with the TIPS program was indispensable to the success of the project.

IMPLEMENTATION OF TIPS IN SOCIOLOGY 1111

George W. Noblit, Department of Sociology and Social Work

Due to high enrollments in Sociology in recent years and a slow growth in the number of faculty positions to staff courses, the Department of Sociology and Social Work has relied heavily on graduate students and part-time instructors to teach lower division courses. Concern over the quality of instruction in recent years led to the formation of the Instructor's Workshop. As a result of deliberations in the workshop, it was decided that a TIPS program could benefit instruction in Sociology 1111. The goals were primarily to provide students with an auxiliary study mechanism, to promote uniformity of course content, and hopefully to increase the quality of instruction in Sociology 1111.

THE SETTING

Sociology 1111 is the introductory course and as such plays a vital role in not only providing students with knowledge but also in recruiting majors for the Department. The TIPS program was to be used by all graduate students and part-time instructors in the Department and, therefore, was designed to be primarily textbook based so that each instructor could maintain his/her independence in lecturing and discussion. It was designed in the summer of 1977 and implemented in fall of 1977 in 10 sections of Sociology 1111 with an initial enrollment of approximately 680 students.

PROCEDURE

After reviewing the available literature on TIPS, and the award of the Seed Grant, the Instructor's Workshop assigned the development of the program to Charles Hart, Karen Kenny, and Nancy Brannon. This team read the text assigned for Sociology 1111 and developed the following: (1) study questions over central concepts in each chapter, (2) the surveys, and (3) the computer assistance system. These products were reviewed by the Instructor's Workshop and implemented for fall 1978.

At the beginning of the fall semester, the instructors attended a TIPS seminar and incorporated it into their instructional formats for that semester. Each week thereafter TIPS, its problems and strengths, were discussed in the Instructor's Workshop. Instructors were free to use the survey results as they so desired in their classes.

THE RESULTS

Since it was evident that major coordination problems needed to be resolved in the fall, no formal evaluation was planned for that semester. Further, attrition of participating instructors during the fall semester finally led to the complete abandonment of the program by the end of the semester.

Interviews with the participating instructors and the program supervisor revealed many problems that accounted for the attrition. The problems stemmed from three sources: (1) lack of adequate support, (2) supervisor-instructor distance, and (3) low student commitment. Since the Center for Instructional Service and Research lacked sufficient funds to employ support staff to execute the program, it fell upon the Department to provide such person power. Given that the system was designed for many sections the responsibility to maintain it was to be assigned to a supervisor. The Department lacked the funds to support such a person, and as a result my research assistant was assigned supervision of TIPS in place of some of his other responsibilities. However, the demands of the program soon outstripped his ability to satisfy them. Editing and computer "down" time was so extensive that Mr. Hart ended up volunteering his assistance. Further, with 10 sections and 680 students the task was well beyond the capabilities of both support staff, and student errors compounded the problem. Even with the development of a new editing procedure, the time demands led to delays in processing and the return of surveys and prescriptions to the students.

The supervisor position in and of itself created some problem, since the instructors did not control this instructional technology. Students would hound the instructor and the instructor would hound the supervisor who was inundated with work. In some cases, it appears that the students verbally abused the instructor for delays in processing and classroom climate was often negatively affected.

Finally, the students had considerable difficulty in successfully completing the surveys which, in turn, created more problems for the supervisor in processing the surveys. In part, a general laissez faire attitude and carelessness on the part of students was responsible, but also cases of intentional vandalism and theft of surveys and prescriptions magnified student resistance to the program and instructor complaints.

In summary, the program was not successfully implemented and the decision to terminate the program was sadly made.

IMPLICATIONS

Obviously, implications based upon one aborted attempt must be quite tentative. However, it would appear that a TIPS system that is to be adapted for multiple instructors and sections needs extensively well-trained support and supervision. The Department was simply unable to provide this. Further, TIPS is predicated upon quick turnaround of surveys; when this is delayed, the entire program becomes an additional contingency for staff and students.

As a result, then, insufficient support essentially determined the unfortunate outcome of this program.

CONCLUSION

This report in no way is meant to question the utility of TIPS. However, in our attempt to adapt it to multiple instructors and multiple sections it became evident that we had not anticipated the required level of support and effort needed to successfully implement it.

A COMPUTER-BASED LIBRARY FOR TEST QUESTIONS FOR ECONOMICS

David H. Ciscel, Department of Economics

The two introductory courses in economics, Principles of Macroeconomics and of Microeconomics, are taught in multiple, large lecture sections. While the average-sized section is between 80 and 100 students, some sections are as large as 250 students. The character of much of the material lends itself to objective examinations, and the size of the sections forces most instructors to depend exclusively on objective examinations and weekly quizzes.

Most instructors follow a similar pattern of testing in the two principles classes. Three major examinations are given during the course of the semester. In addition, as an aid to the students between examinations, most economics instructors give 8-10 weekly quizzes. Examinations tend to have 40 to 60 objective questions on them and quizzes are composed of 10-15 questions.

The consequence of this quantity of testing in a department that ordinarily offers over 20 sections of its two principles courses is that the secretarial services of the department are overloaded with the generation of objective tests. In addition, most instructors used the same printed test banks so that the same test items were being typed over and over.

PROPOSED SOLUTION

The solution was a computerized test bank. With the financial assistance of both the Center for Instructional Services and Research and the College of Business Administration, a 2000 test item bank was developed during the spring/summer of 1977.

We had five basic objectives for the computerized test bank.

1. To build a computer-based library of test questions for economics 2110 and 2120

2. To create a set of questions that can be tested, over time, for their reliability

3. To improve the efficiency of test generation by relieving secretarial resources to other departmental priorities

4. To provide a resource bank for development of student guides to Economics 2110 and 2120 more appropriate to courses at MSU

5. To provide a bank of questions that would be compatible with the two TIPS (Teaching Information and Processing System) economics courses.

PROCEDURE

Creation of the computer test bank requires several stages of development. First, categories or topic areas for the test bank had to be developed (see Appendix A). With a test item file this large it is important to segment the items into easily identifiable categories. Second, identification of appropriate test items was necessary. Individual instructors wrote new items and contributed items from their personal tests banks. In addition, items from the most popular commercial test banks were selected. As items were selected for inclusion in the computer test bank, they had to be classified in the correct topic category. Third, the test items had to be typed on the terminal into a storage disc file in the computer, using the form developed by the MSU Center for Computing Services. The final stage was the most time consuming, and correcting all the items was very tedious.

As the idea of the project developed, a set of milestones was adopted to keep the project on time.

February 1977	:	Development of computer test item file categories for Economics I and II (see Appendix A) and identification of sources of test items from colleagues and from commercial test banks. Secure financial assistance from the MSU College of Business to hire a student assistant to type test items into a computer file through a CRT.
March-April 1977	:	Identification of appropriate test items, assignment to categories for Economics II and typing of items into computer files.
May 1977	:	Completion of file of 600-800 test items for Economics II. Editing the Economics II file for duplication, mistakes and other errors. Development of computer test item categories for Economics I and identification of sources of test items.
June 1977	:	Identification of appropriate test items, assignment to categories for Economics I and typing of items into computer files. Experimental use of the Economics II file in one or two summer I classes.
July 1977	:	Completion of file of 600-800 test items for Economics I. Editing the Economics I file for duplication, mistakes, and errors.

July-August 1977	:	Implementation of Economics II file for use in every summer II course. Experimental use of the Economics I file in one or two summer II classes.
Fall Semester 197	:	Use of the complete test item file for all Economics I and II classes.

The milestones were followed closely. Two comments are, however, appropriate for others who wish to adopt a computerized test bank. Editing and correcting of test items continued throughout the 1977-78 school year. The final set of test items (2000) was so large that errors were difficult to locate. As students took computer generated tests, errors were found and corrected. In the course of the first year of use of the test bank, it became clear that several topic areas had been short-changed relative to course needs for test items. In the summer of 1978 about 100 test items were deleted and 200 new questions were added to provide more balance to the test bank.

USE OF THE TEST BANK

The success of the computerized test bank exceeded our expectations. Most instructors in the two principles classes use the computerized test bank for test generation. Several hundred examinations and quizzes have been prepared by this system since it became operational in summer 1977.

Users of the test bank have found only minor problems. The items are printed in capital letters only and this characteristic of test form occasionally reduces readability. The test bank is not keyed directly to the class texts. Thus, it is sometimes difficult to match computer topic areas with chapter titles in the text. Finally, after a time, instructors develop a desire for more questions, even though we have used the maximum computer space allowed by this routine's programming.

The most obvious benefit of this system is the availability of a set of high quality items in a system that is compatible with the computer center's OpScan grading system. In addition, the Economics Department has been able to allocate secretarial time to more productive employment.

APPENDIX A

COMPUTER TEST ITEM TOPIC AREAS

11 Introductory Materials and Scarcity

12 Positive and Normative Economics

13 History of Economic Ideas

14 Introduction to Supply and Demand

15 Transformation Curve and Efficiency

16 Consumer Choice (The Demand Function)

17 Price Elasticity and Other Elasticities

18 Advanced Topics in Demand (Utility)

19 Production

20 Costs and Decision Making in the Competitive Firm

21 The Competitive Market

22 Price Floors and Ceilings in a Competitive Market

23 Monopolistic Competition

24 Oligopoly and the Kinked Demand Curve

25 The Large Corporation (J.K. Galbraith)

26 Antitrust

27 Monopoly and Regulation

28 Factor Markets (Marginal Productivity Theory)

29 Income Distribution, Poverty and the Segmented Labor Market

30 Unions and Labor Legislation and Collective Bargaining

31 Special Topics (Defense Expenditures, Discrimination)

32 Market Failure

33 Role of Government

34 Economic and Social Power

35 Circular Flow

36	Public Choice and Public Goods
37	National Income Accounts
38	Unemployment and Business Cycles
39	Inflation
40	Consumption Function, Multiplies and Accelerator
41	Simple Keynesian Model
42	Complex Keynesian Model
43	Money and Banking (the Fed)
44	Monetary Policy and Investment
45	Business Cycle and Inflation - Monetarist Approach
46	Fiscal Policy and Tax Policy
47	Macro policy-Monetarist Approach
48	Economics of Government Failure
49	International Trade Theory
50	International Trade and Balance of Payments
51	Comparative Economic Systems
52	Economic Growth and U.S. Growth
53	Less Developed Countries

PART IV
AUDIO-VISUAL SUPPORT OF INSTRUCTION

AUTOMATIZATION OF SHORTHAND BRIEF FORMS, PHRASES, AND 1,000 MOST-FREQUENTLY-USED WORDS THROUGH USE OF SIGHT/SOUND PROGRAMS

M. Gerald Lathan, Department of Office Administration

There is a group of words and phrases that all business writers use no matter how highly specialized their writing may be. Silverthorn and Perry (1970) have listed these words according to frequency of use in their list of the Fifteen Thousand Most-Used Words in Business Communication. The authors of the textbooks used in Office Administration (OFAD) 2120, 2130, and 3140, Louis A. Leslie, Charles E. Zoubek, et al, (1973) have devised abbreviated shorthand outlines (brief forms) for 133 words from this list that are used most frequently, and for 133 phrases that contain these high-frequency words. Therefore, any shorthand writer can increase his writing speed if these brief forms and phrases are learned to the point that they are automatized in recognition and in writing. A great deal of emphasis is placed on automatizing brief forms and phrases in writing Gregg Shorthand. Also, in these shorthand courses at Memphis State University, students are expected to automatize the first 1,000 most-frequently-used words according to the Silverthorn list.

PROCEDURE

The Shorthand Sight/Sound Programs were designed to facilitate the automatization of these shorthand outlines. A set of slides containing individual outlines of the brief forms, phrases, and Silverthorn words was developed in the following way:

1. Squares (1½" x 1½") were drawn to cover a sheet of paper (40 squares to an 8½" x 11" page).

2. A pair of light or dotted lines were typed across the vertical center of each square to represent the space between the lines in the stenographer's notebook. This helped the student realize position and size of characters on the projected image. To avoid having to draw additional pages, the original page was photocopied to supply enough pages to write the 133 brief forms, 133 phrases, and 1,000 most-frequently-used words.

3. From a chart inside the back cover of the textbook used in OFAD 2120, one brief form or phrase was written in each square on the dotted lines as the shorthand writer would write them in a stenographer's notebook.

4. A sequence number was typed in the upper-left corner of each outline square, and the lesson number in which that brief form is presented in the textbook was also typed on the dotted line following the shorthand outline. This number helped the reader determine the proportion of characters and the beginning position of the outline. (This is an important factor since all shorthand writers do not write the same size characters. The same is true for longhand writers.)

5. A transparency was made of each completed page.

6. The individual squares that contained the shorthand outlines were cut and mounted on 2" x 2" cardboard or plastic frames for viewing in a slide projector. (Only the best outlines were used to form a complete set. Therefore, poorly written or poorly developed outlines were remade.) The frames were obtained from a photography supply retailer or camera shop.

7. Each slide was labeled on the frame by the name and number of the shorthand outline. This was done to assist the user in identifying and/or arranging the slides for class presentation or in testing. Labeling also allowed students to work with the slides in a variety of ways with immediate reinforcement without supervision.

8. A slide tray was used for each set of slides: (a) brief forms, (b) frequently used phrases, and (c) 1,000 most-frequently-used words in groups of 100 each.

9. Each intended use of the slides was developed into a program that contained written directions (description, materials needed, objective, directions for use, and how to check yourself); recorded directions; and a written key for each program.

10. A cassette was recorded for the first four programs. Side One of one cassette contained a verbal transcription of each brief form spaced at five-second intervals. Side Two contained a verbal transcription of the phrases at the same time interval. Both were recorded in sequence numbers on the slides and the chart inside the back cover of the shorthand textbook. Another cassette was recorded in the same way but with a ten-second interval between words and a signal to manually advance the slide projector.

11. Blank cassettes were provided with the programs so that students could use them to record their responses to the slides as the slide projector automatically advanced the slides or as the students manually advanced the slides by use of a remote control to the slide projector.

Figure 1 shows a brief description of each program as it was presented for use by the students, a list of materials the student would need to acquire from the laboratory assistant, and the objective of each program.

SEED GRANT TO FACILITATE LEARNING
Shorthand Sight/Sound Programs

PROGRAM #1 A. Description: Automatic Recognition of Brief Forms

B. Materials Needed: 1. Slide Tray #1
2. Recorded Cassette #1

C. Objectives: Student will learn to associate shorthand outline with verbal transcription.
Student will increase reading rate of shorthand by increasing speed of recognition of brief forms.

PROGRAM #2 A. Description: Automatic Recognition of Phrases

B. Materials Needed: 1. Slide Tray #2
2. Recorded Cassette #1

C. Objectives: Student will learn to associate shorthand outline with verbal transcription.
Student will increase reading rate of shorthand by increasing speed of recognition of frequently-used phrases.

PROGRAM #3 A. Description: Increasing Speed in Writing Brief Forms

B. Materials Needed: 1. Slide Tray #1
2. Recorded Cassette #2

C. Objectives: Student sees and hears outline and writes as many times as possible before next slide appears.
Student will increase speed and accuracy of writing brief forms.

PROGRAM #4 A. Description: Increasing Speed in Writing Frequently-Used Phrases

B. Materials Needed: 1. Slide Tray #2
2. Recorded Cassette #2

C. Objectives: Student sees and hears outline and writes as many times as possible before next slide appears.
Student will increase speed and accuracy of writing phrases.

PROGRAM #5 A. Description: Speed Reading and Writing of Shorthand Brief Forms and Frequently-Used Phrases

B. Materials Needed: 1. Slide Trays #1 and #2

C. Objectives: Student will increase reading and writing rate of shorthand by increasing speed of recognition of brief forms and phrases and by writing the same outlines within a time limit.

PROGRAM #6 - #15 A. Description: Speed Reading and Writing of Shorthand Outlines of 1,000 Most-Frequently-Used Words According to the Silverthorn List

B. Materials Needed: 1. Slide Tray #

C. Objectives: Student will increase reading and writing rate of shorthand by increasing speed of recognition of most-frequently-used words and by writing the same outlines within a time limit.

Figure 1

USE OF THE MATERIALS

The Shorthand Sight/Sound Program (as they have come to be called) were designed primarily for use by students during laboratory hours. Therefore, a duplicate set of the programs was placed in the Learning Media Division of the Center for Instructional Service and Research in Brister Library and in the Office Administration, College of Business, shorthand laboratory on the campus at Memphis State University. All the necessary equipment (cassette recorder/player with microphone and slide projector with remote control) was made available to students during regular laboratory hours at both locations. Laboratory assistants were instructed in the use of the programs and the equipment. They were available to students for setting up and operating the equipment. The students were allowed to count the use of the programs as part of a required outside laboratory assignment for the shorthand courses at MSU.

Three groups of students were in mind when the programs were developed (encompassing all shorthand students):

1. Students who had not taken a shorthand course before. These students used the programs in the process of learning the outlines (reading and writing) for the brief forms, phrases, and Silverthron words;

2. Students who had taken a shorthand course but needed some reinforcement because of the time element since they last took shorthand;

3. Students who needed remedial study and practice of these shorthand outlines.

The individual programs in the Shorthand Sight/Sound Programs allowed the students to respond by copying the shorthand outline and/or verbally recording the transcript of the slide. At any point the student could return to the beginning of the slide program and the accompanying cassette to check the accuracy of his responses through the use of a written or verbal key to the program.

The programs can be used in several ways: for classroom presentation, review, and testing and for individual use by the students. Here are some suggested uses that have also been carried out in beginning and/or intermediate shorthand classes at MSU:

1. Presentation of brief forms in class.

2. Review of brief forms and phrases in class. A slide projector that has an automatic interval timer can be set to allow each slide to be projected for 5, 8, or 15 seconds. These time intervals allow enough time for beginners to see the brief form or phrase and to write it several times before the next slide replaces it. For more advanced classes, the instructor can advance each slide (either from the machine or by remote control) according to the verbal response of the class.

3. Testing of brief forms, phrases, and/or most-frequently-used words. The slides can be used for testing the students' ability to recognize brief forms, phrases, or Silverthorn words by a set time interval (5, 8, or 15 seconds) or manual control by the instructor. They can be used in the original sequence or "scrambled." Since they are labeled and numbered, there are no problems in rearranging them for future presentations.

4. Individualized instruction. The slide programs can be used by the individual student who has been absent or needs remedial work in any of the three areas of learning. Make-up work or testing can easily be accomplished with the slides.

EVALUATION

Students were asked to respond to a questionnaire about the Shorthand Sight/Sound Programs at the end of the fall and spring semesters, 1977-1978. From eight sections of beginning and intermediate shorthand at MSU, 78 students returned the questionnaire. Of this number, 23 students (or 29.5 per cent) had used the programs, and 55 (or 70.5 per cent) had not used the programs. Of the 23 student who did use the programs, 19 used the brief forms programs, 14 used the phrases programs, and 14 used the most-frequently-used words programs for a total of 83.5 hours. Forty-eight per cent (47.8) found the programs to be very effective, 43.4 per cent found them to be somewhat effective, and 8.7 per cent found them to be slightly effective. Only 4.3 per cent (one person) found the programs to be ineffective after having used them.

The problems the students had in using the programs were centered around finding the equipment available (30.4 per cent) due to limited laboratory hours, and operating the equipment (21.7 per cent) even though a laboratory assistant was available.

Most students gave as their reason for using the Sight/Sound Programs (69.5 per cent): To review brief forms and phrases. Others responded to reasons of learning brief forms and phrases by 34.8 per cent and to remedial learning of brief forms and phrases by 21.7 per cent. Most students used the first 100 most-frequently-used words programs (60.9 per cent). Nine students used the second 100 programs, three used the third 100, two used the fourth 100, and two used the fifth 100. No students indicated the use of programs that contained the sixth through tenth 100 most-frequently-used words programs. These are studied in advanced shorthand.

Some written comments about the programs indicated that:

1. Students felt that more consideration should be placed on convenient utilization of equipment and facilities for those students who work during the day.

2. Students felt that the programs should be used more in class.

3. Other methods of improving shorthand skill (dictation tapes) were more beneficial.

4. Laboratory assistant should be more familiar with use of the equipment and the programs.

5. The programs were not readily useful for some students.

On the other hand:

1. Some students felt the programs are "excellent for reviewing old material."

2. The program was effective for some, and they found "it to be a more speedy way to learn."

3. Others "felt it (to be) an excellent self-teach program which could be adapted to the individual's speed."

It was felt at the outset of this project that through the use of a device such as the Shorthand Sight/Sound Programs effectiveness and efficiency of learning brief forms, phrases, and most-frequently-used words would be made more interesting and realistic. For those students who took advantage of the programs, they found this goal to be realized.

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PROJECT TO IMPROVE TEACHING AND LEARNING IN ARCHITECTURAL DESIGN I

Kevin S. Munroe, Department of Engineering Technology

In the fall of 1976 plans were made to change the core curriculum for Engineering Technology. These changes included requiring all students in the division to take Technology 2555, Architectural Design I. This would increase the enrollment in the course from 70 students per year, with majors in Architectural Technology, Construction Technology and Industrial Arts, to 150 students per year, including many from such diverse backgrounds as electronics and manufacturing. In addition, efforts had been underway for some time to increase the number of students enrolling in the course from Interior Design, Home Furnishings, and Real Estate. The result of this increase in students would change the course from an easily managed class of between 25 and 30 students per semester to a larger lecture/lab for between 50 and 100. The changing background of the students would also have an effect on the course.

In the past, virtually all of the students were directly interested and involved in the subject. Many had previous experience in drafting or residential construction and virtually all the students could clearly perceive the relevance of the material to their future. The new students who would be required to take the course would be from a far more diversified background. It was anticipated that both their knowledge of the field and their motivation would be noticeably less than the present students.

DEVELOPING AN INSTRUCTIONAL STRATEGY

It was obvious that many of the teaching methods which were currently being used would have to be altered. The small lecture format utilizing chalkboard drawings would become more difficult to see in a large lecture. In addition, the high degree of individual contact possible in the smaller class would not be possible in the larger format. Material would need to be presented in a more thorough and systematic way to offset the decreasing background of the students. Procedures for assignments, testing and grading would have to become more structured in order to handle the increased load.

The first step of this process involved the creation of a series of handouts explaining the laboratory assignments and procedures. These handouts when completed will become a Laboratory Manual for the course. This will allow the explanation of the laboratory assignments to be taken out of the lecture portion of the class. More time would thus be made available to provide the necessary information to augment the student's background in the subject. In coordination with this phase, a series of sample laboratory assignments would be prepared to further clarify the required output of the student.

Secondly, grading procedures were streamlined. Grading sheets were prepared for each assignment. Each sheet rated the student's performance on the most important aspects of that assignment. The student would know at a glance his strong and weak points for that assignment, and grading time would be reduced.

It was decided that the major thrust of the course development would be targeted at preparing an alternate means of presentation for some of the lecture material. This presentation would be geared for the large lecture format which the course would assume. In order to do this, additional funds would be needed. The Seed Grant to Facilitate Learning was to provide the necessary funds to complete this part of the program.

DEVELOPING SLIDE PRESENTATIONS

The technique selected was to utilize a series of projected images to increase the impact of the lecture material through graphic reinforcement of the concepts being discussed. A format using slides was chosen because of its flexibility both in presentation and in altering the content and arrangement of the presentation to meet future needs. Two lecture series, consisting of three lectures each, were chosen as being the most appropriate for the utilization of this technique.

The first lecture series involved an examination of the effects of site conditions on residential design. This required a series of graphic images to illustrate the major points of the lecture. There were three major types of slides utilized in this presentation. (1) Title Slides - These would serve as an outline of headings which would aid the student in identifying the major points and topics within the lecture. They would provide key words and headings to aid in note taking. (2) Technical Slides - Illustrating more complex, technical information contained in the lectures, such as categorical analysis of soil types. (3) Illustrative Sketches - These were a series of simple line drawings intended to provide a visual image of the topics being discussed.

The second lecture series involved the principles and methods of residential construction. What was required was a series of technical drawings to illustrate the relationships of the various materials and the methods used to assemble them. This involved a step by step development of a wall section from the footing through the cornice details, including several alternate methods of constructing the various parts.

PRODUCTION OF SLIDE PRESENTATIONS

The production of the slide presentations involved a five step procedure. The first step was the production of a story board for each presentation. These were prepared by the instructor. A small sketch of each image was developed and all were coordinated with the lecture material. Important information such as notes, titles and other information to be included in the slides was prepared. This formed the outline for production of the

materials and later for the development of the script.

The two sets of slides would thus create two very different types of impact. One would be conceptual, the other technical. This would give the opportunity to explore the range of the slide medium while still keeping the production techniques basically the same.

The second step was the production of the graphic materials. This was handled through the Center for Instructional Service and Research's Instructional Development and Support Division. We were fortunate to be able to obtain the services of a former graduate of the Architectural Technology Program to do all of the technical drawings. Other graphic artists from the Center helped in the preparation of the titles and illustrative sketches. It was decided that the drawings would be done in ink on colored poster board. The ink would allow for crisp reproduction and good enlargement capabilities when photographed and projected. Colored poster board was chosen to reduce the contrast and the glare that a white background would produce when projected. It was discovered that fairly strong colors could be used because they tended to dissipate in the enlargement process.

The third step was to photograph the graphics in a 35mm format. This task was done through Photo Services. All of the graphics were photographed, some, several times and with various colored filters. The slides were then developed and cardboard mounted for review.

The fourth step was review and editing. At this stage errors of various kinds were weeded out. Some mistakes were found in the graphics. These were sent back to be corrected and photographed again. Other problems were found with the slides themselves such as, spots, focus problems and improper cropping. On the whole these problems were minor and only involved a few of the many slides involved. The slides which had been selected were then sent back to Photo Services to be remounted in Gepe Anti-Newton glass mounts to insure a long useful life. Upon their return the slides were assembled in carousel slide trays ready for showing.

The fifth step in producing the slide presentations was to prepare a script. The intention was not to develop a word for word type of script to be read with the presentation, but rather to develop an outline script to key the lecturer to the main points to be covered. This approach would allow the speaker more freedom of movement rather than being tied to a podium. The lecturer would then be free to point out specific items in the slides or to field questions without the fear of losing his place. An interesting technique was used in this regard. Since all of the slides were in graphic form, the originals were taken and reduced to approximately 1½" square on a reducing Xerox. These miniatures of the slides themselves were arranged in the proper order and pasted up along the left hand edge of 8½" x 11" paper. Notes could then be added along the right hand side of the paper as needed. This produced an extremely workable script with the advantage of being able to see exactly what would be coming up next.

ALTERNATE METHODS OF PRESENTATION

Since the graphics were produced independently from the slides, it was possible to consider alternate methods of presenting the material. The most logical method was that of utilizing transparencies. The graphics as produced could readily be converted or processed to form overhead transparencies. It was determined that it might be beneficial to have transparencies made in order to make the information more readily available for some of the smaller night sections which are taught by part-time faculty. The two presentations were analyzed for their adaptability. The first series was determined to be unsuitable because the images were too general in nature and because of the short time duration each image would be shown. The problems involved in utilizing transparencies with this presentation were thought to outweigh any benefits.

The second series, however, was found to be well suited to this alternate means of presentation. The images were sufficiently complex and relevant and would be shown for a long enough period of time that the technique would be justified. In situations where the slides would not be usable, transparencies would provide a beneficial alternative. Accordingly, the series on construction was produced as a set of overhead transparencies as well as slides. Figures 1 through 4 are illustrations the graphic artists developed.[1]

RESULTS

The physical results of this project are a 70-slide presentation with script on Site Conditions, a 25-slide presentation with script on Residential Construction, and a matching set of transparencies on Residential Construction. Both slide sets have been utilized in lecture and have proven quite satisfactory. The students have found that the improved images and delivery increase their visualization of the subjects. Note taking has also been simplified. The only complaint has been that they would like to have some of the images reproduced as handouts. This is currently being investigated.

From the professor's point of view, the project has been successful. A great deal of time which has been spent drawing on the chalkboard can now be spent dealing in greater depth with the topics. The images are also of better quality and truer scale, enabling the students to get a clearer picture of the relationships shown.

Perhaps the most important result of this type of project is that it initiates an in-depth examination of the material being presented and the most effective methods for presenting the material. In this case a restructuring of the lecture content and the relationship between the lecture and the laboratory has been instituted. Changes and improvement affecting, not just the six lectures involved, but the entire course have begun. The programs of handouts, example drawings, grading sheets and organization discussed

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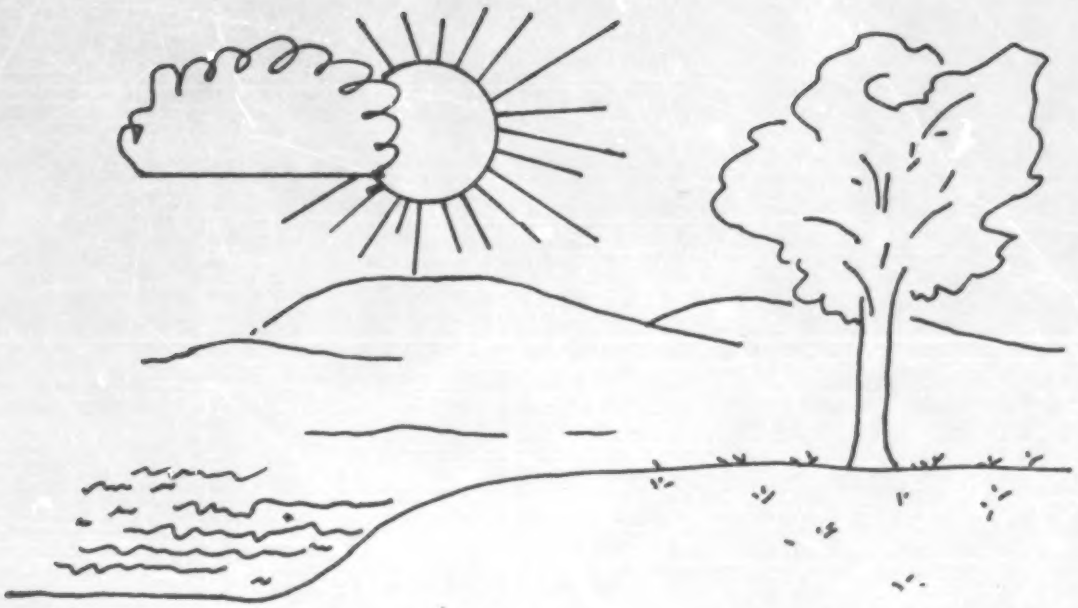
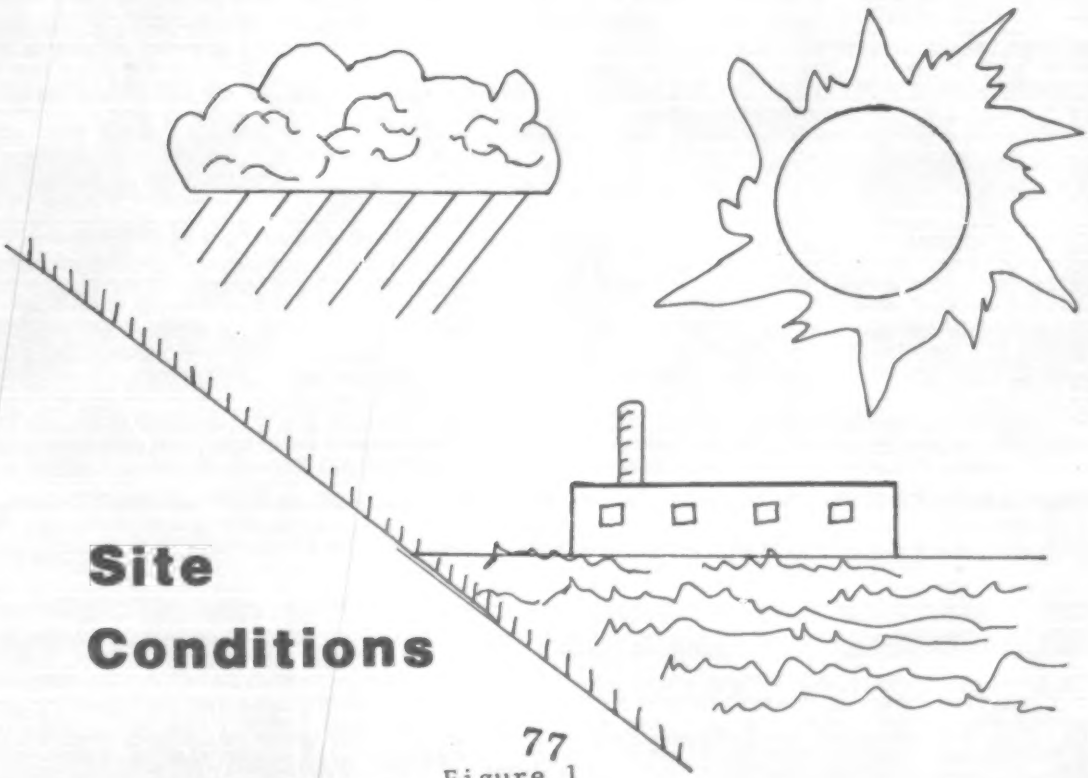
[1]The graphic art work was done by Neil Anderson and Leatha Johnson.



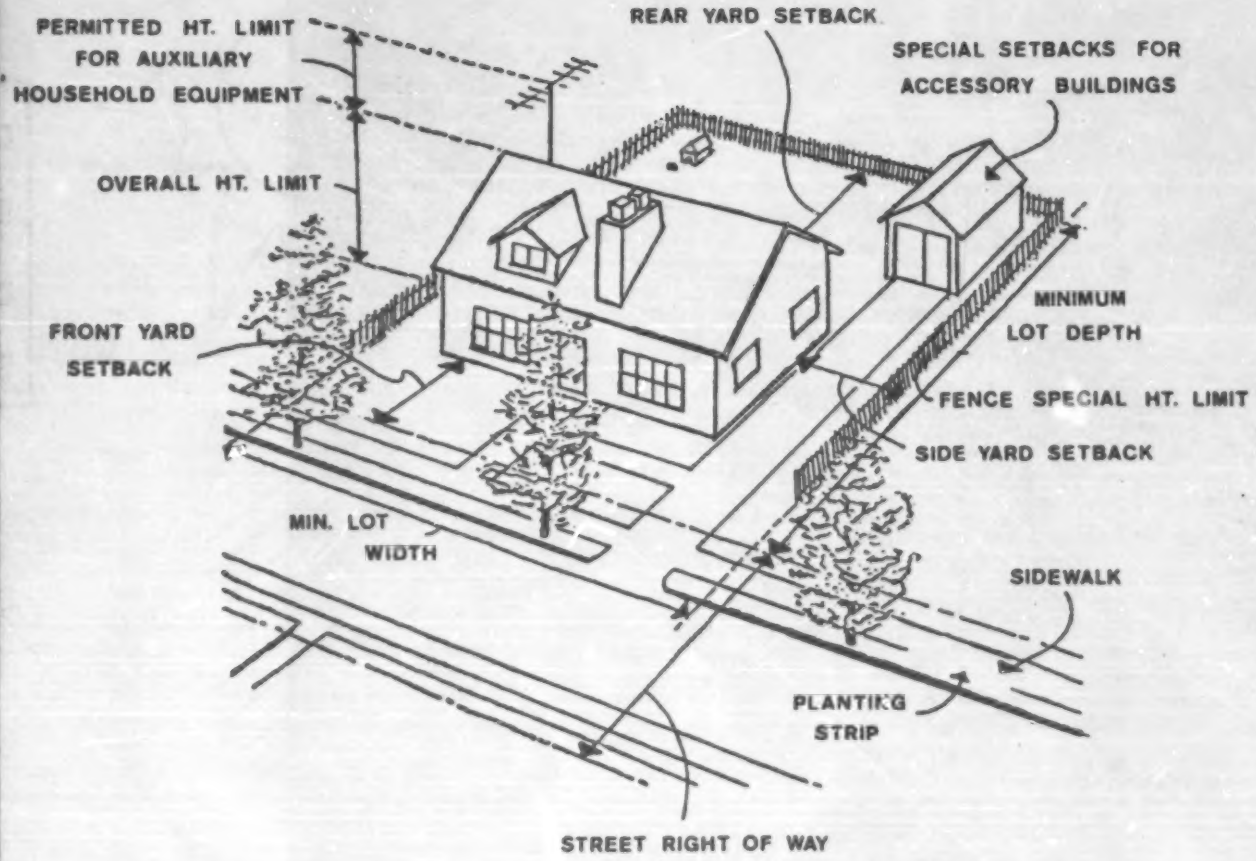
Natural Conditions

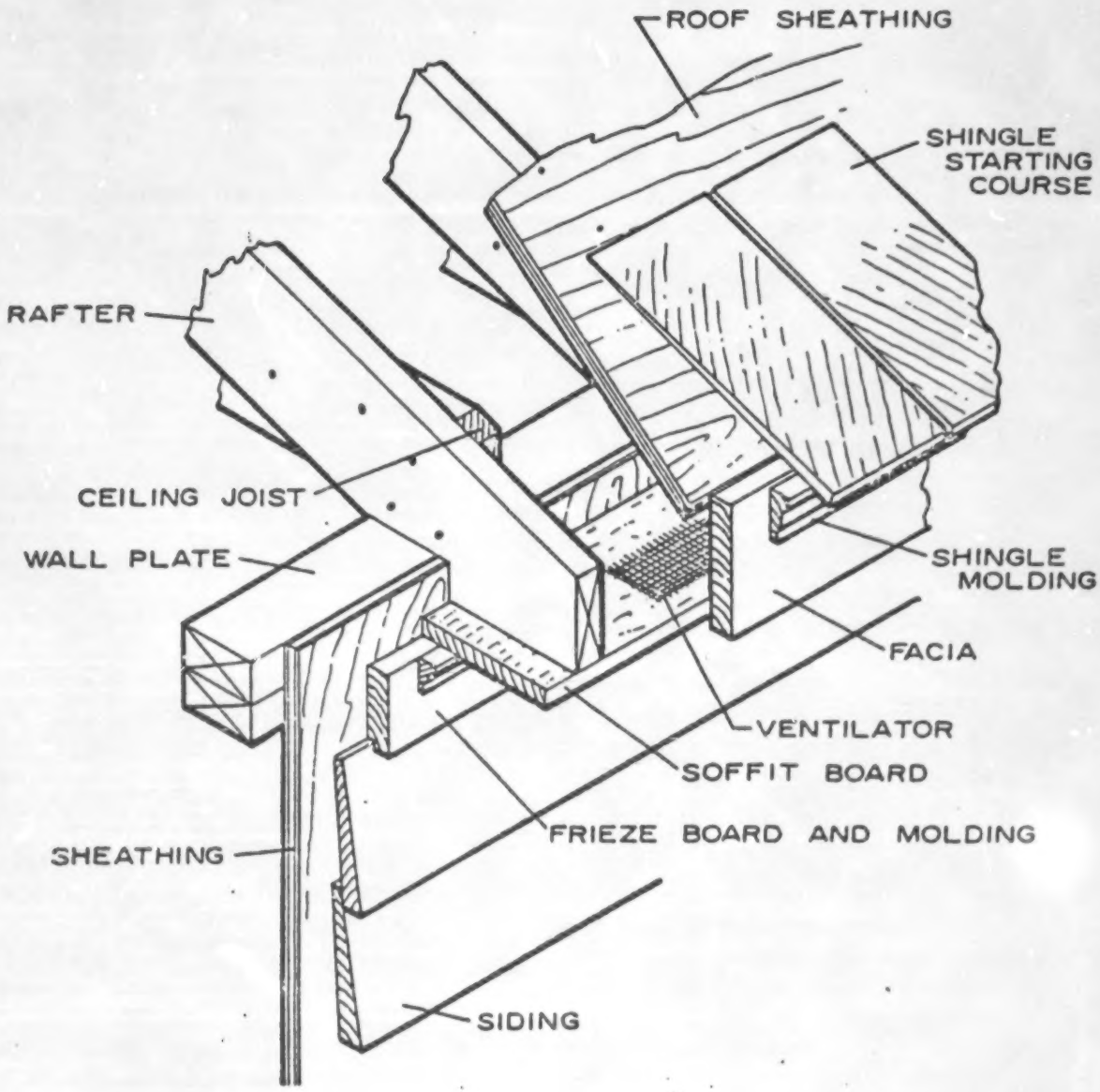


Site Conditions

77

Figure 1


PERMITTED HT. LIMIT
FOR AUXILIARY
HOUSEHOLD EQUIPMENT
OVERALL HT. LIMIT
FRONT YARD
SETBACK
REAR YARD SETBACK
SPECIAL SETBACKS FOR
ACCESSORY BUILDINGS
MINIMUM
LOT DEPTH
FENCE SPECIAL HT. LIMIT
SIDE YARD SETBACK
MIN. LOT
WIDTH
SIDEWALK
PLANTING
STRIP
STREET RIGHT OF WAY



NARROW BOX CORNICE

79

Figure 3

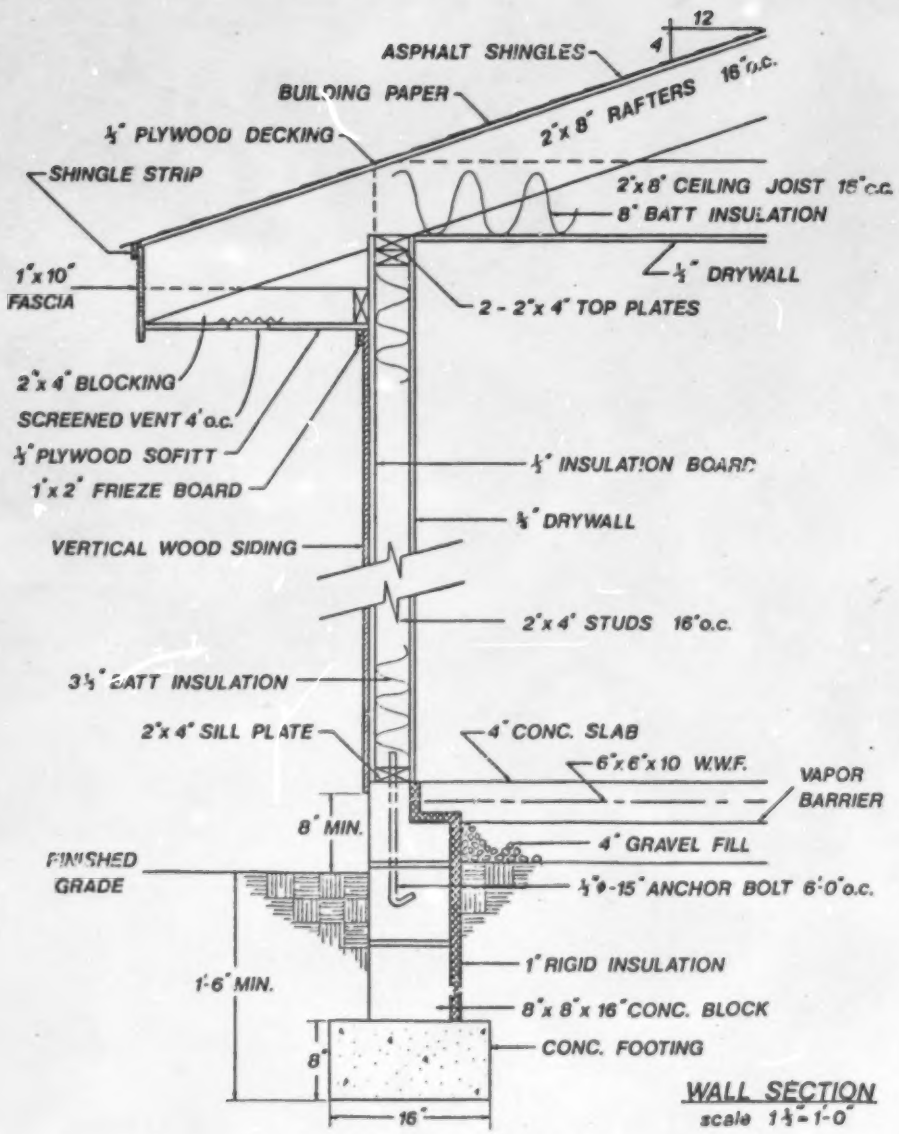

12
4
ASPHALT SHINGLES
BUILDING PAPER
½" PLYWOOD DECKING
SHINGLE STRIP
2"x 8" RAFTERS 16" o.c.
2"x 8" CEILING JOIST 16" o.c.
8" BATT INSULATION
½" DRYWALL
1"x 10" FASCIA
2 - 2"x 4" TOP PLATES
2"x 4" BLOCKING
SCREENED VENT 4' o.c.
½" PLYWOOD SOFITT
1"x 2" FRIEZE BOARD
½" INSULATION BOARD
½" DRYWALL
VERTICAL WOOD SIDING
2"x 4" STUDS 16" o.c.
3½" BATT INSULATION
2"x 4" SILL PLATE
4" CONC. SLAB
6"x 6"x 10 W.W.F.
VAPOR BARRIER
8" MIN.
4" GRAVEL FILL
FINISHED GRADE
½"ø-15" ANCHOR BOLT 6'-0" o.c.
1" RIGID INSULATION
1'-6" MIN.
8"x 8"x 16" CONC. BLOCK
8"
CONC. FOOTING
16"
WALL SECTION
scale 1½" = 1'-0"

Figure 4

above are all well underway. Several other lectures may be candidates for similar treatment in the future. The evaluation process, once begun, is continuous. It is also contagious. The impetus begun in one course naturally spreads to others. Many other courses are now undergoing a similar evaluative process.

SUMMARY

The production of visual support for the two lecture series in Architectural Design I has been accomplished, and successfully implemented. The objectives of the program, mainly to aid in making the transition from a small to a large lecture format, and to graphically reinforce the lecture material, have been met. In addition, this project has aided in bringing about a major reevaluation of the course and a streamlining of presentation techniques and grading processes. Similar additional projects both in this course and in similar courses across the campus should prove to be quite beneficial.

PART V
FACULTY SEMINAR IN INSTRUCTIONAL IMPROVEMENT

UNIVERSITY TRAINING SEMINAR IN TEACHING READING - WRITING

Thomas A. Rakes, Department of Curriculum and Instruction

The effectiveness of college reading improvement programs has been reflected in numerous studies (Carter and McGinnis, 1967; Entwisle, 1960; Guildord, 1976; Mayfield, 1977; Maxwell, 1971, 1972; Power, 1976; and Tillman, 1972). Comparisons between selected variables, such as grade point average and success in reading improvement courses, have also been reported (Fairbanks, 1974). However, most published reports have considered reading and study skills more often than not, separate from content subjects. Direct instruction combining instruction in reading/content areas is relatively new. However, as early as 1942, Artley reported comparisons between reading comprehension and content materials.

It has been within the last decade that serious attention as to techniques for content reading have appeared with frequency (Bergman, 1977; Kratz, 1970; Palmer, 1975; Robinson, 1975; and Swalm, 1972). More specifically, the literature contains recent evidence to indicate the usefulness of reading/English related instruction and particularly composition and reading (Balasa, 1977; Coomer, 1974; Eanet and Manzo, 1976; Sanderlin, 1977; and Shepherd, 1974).

THE PROGRAM

Within the past five years more attention and programs have been directed toward academically marginal undergraduate students. At Memphis State University this concern is evidenced in offering both credit and non-credit reading improvement courses, library facilities for self-help and language improvement, funded projects for aiding reading/content skills development (e.g. Learning Assistance Program, 1976-77) and most importantly the Educational Support Program. These and other efforts represent an institutional commitment to serving an expanding audience now enrolled as full or part-time students. The current proposal is designed to further extend University commitments to maintain both quality instruction and enrollments.

During the period from May 11 through May 14, seven faculty members from the English Department participated in twenty-six hours of seminar meetings provided through the Department of Curriculum and Instruction, Reading Center. Each training session provided application level instruction on topics relating reading improvement and English with special attention to composition skills. The major purpose of the sessions was to acquaint faculty participants with teaching strategies appropriate for combining basic reading skills in English composition. A daily outline of topical content appears in Table 1.

Table 1

Seminar Schedule

May 10	Welcome Discussion of objectives, evaluation techniques and participant needs The Reading Process Measuring Reading Competency (formal and informal techniques)
*May 11	Assessment techniques continues (GII, cloze, IRI, standardized) Readability Assessment Strategies Word Study Techniques (vocabulary and word analysis techniques)
*May 12	Developing Meaning Skills (questioning, thinking and evaluating) Introducing a Textbook Dictionary Usage
*May 13	General Strategies for Improving Reading/Writing Directed Reading-Thinking Activities Projection of Program Needs Evaluation

*Textbooks used in ENGL 1101 are needed for these sessions.

Sessions are from 9:00-12:00 and 1:00-3:30 with breaks taken as needed.

SOURCE AND COLLECTION OF DATA

The sample included seven faculty members from the English Department, College of Arts and Sciences. Two instruments were used to evaluate the project: (1) information from participant ratings of the seminar sessions and (2) results from a pre-post test of reading/writing study strategies. While participant attendance was voluntary, one hundred per cent attendance was maintained throughout the week. Participant ratings on an opinionnaire were used as an indication of satisfaction with the training sessions.

RESULTS

Participant ratings, comments and demographic data concerning the participants appear in Appendix A. For items 5-12, a mean score of 4.3 was obtained

with a range from a maximum of 5 (items 9 and 10) to a low of 3.1 on item 11.

On a sixteen item pre-post test the mean entry level score was 16.6. At the conclusion of the session, post scores averaged 78.6 per cent higher with a mean score of 95.2. The excellent post-test scores on the content tests and very positive participant ratings of the seminar reflect, ingeneral, a successful program. Table 2 reports a "t" value of 13.12 for the test scores which indicates a significant difference in pre-post test scores at the .0001 level.

Table 2

t-Test on Pre-Post Test Scores

	Pre	Post	"t" value
Mean	16.643	95.243	13.108
Std. Dev.	10.767	6.561	

DF - 6

DISCUSSION AND RECOMMENDATIONS

Results from the project indicate very definite progress in providing practical staff development experiences. The small scale project discussed in this report supports the view that interdisciplinary staff development seminars can be beneficial to all faculty involved as well as providing improved learning opportunities for university students. Specialized training of university faculties should result in better learning for all students.

The following recommendations are made relative to the teaching of special students at Memphis State University.

1. The teaching of special client groups must be considered a valued, rewarded and integral enterprise at this institution. Ultimate responsibility should be left to academic departments, not non-academic or purely service level agencies within the university.

2. Sufficient staff development seminars, individualized materials and facilities should be available if special students are to be given a realistic opportunity to successfully meet university academic standards.

3. Attention should be given to surveying basic reading-study achievement levels of all special students on an entrance, interim and exit basis.

4. A core of faculty interested in developing and maintaining appropriate instructional programs for special students should be identified and organized so as to make faculty resources readily available to students.

5. Follow-up sessions should be conducted during the fall 1977 academic semester. Those instructors teaching ELED 1201, Reading and Study Skills for University Students, should serve as facilitators.

6. Additional specialized staff development seminars should be available to all departments within the university.

The efficient utilization of available faculty expertise is essential if colleges are to develop inexpensive staff development programs. Better teaching can result from shared knowledge and identification of mutual instructional problems. Cross-campus efforts which directly involve faculty members in interdepartmental instructional improvement represent a potentially powerful source of self-improvement for all institutions. Particularly on a large campus such as Memphis State University, an ongoing program should be established.

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Appendix A

READING/WRITING SEMINAR
EVALUATION FORM

1. Sex 5 Female 2 Male

2. Age 3 Less than 35 4 35 and over

3. Formal Education ___Bachelor's 6 Master's ___ Specialist 1 Doctorate

4. Teaching Experience 1 Less than 5 years 1.5-10 years 1 More than 10 years.

. . . . . .

Directions: You may agree or disagree with the following statements. There are no correct or incorrect answers so feel free to express your feelings. Please reflect your own opinion about these items by circling the answer that best describes how you feel. Also, a blank is provided after each statement for any written comments that you may care to make.

5. Adequate space was provided for the meetings.

(5) ✗	(4)	(3)	(2)	(1)
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

Comments: 4.7

None

6. The participants had an opportunity to contribute to the development of the content of the meeting.

Strongly Agree ✗	Agree	Undecided	Disagree	Strongly Disagree

Comments: 4.7

1. A strong point of these meetings was the freedom with which ideas could be discussed and the format could be altered to the material relevant to our needs.

2. There was good interaction between the group and group leader.

3. Though the instructor had a plan for the course, participants were encouraged to ask for information and to make suggestions.

7. The content of the meetings was relevant to my needs.

Strongly Agree	Agree ✗	Undecided	Disagree	Strongly Disagree

Comments: 4.0

1. I hope so. If the content is not relevant, then the fault will be mine.

2. Many practical suggestions for classroom use and much information about programs was given out.

3. I am not yet sure how I will use what I have learned but I believe that an understanding of how students learn to read is important.

4. While I do not see a way to use everything taught, I have a much greater awareness of the reading program, and I believe that I can use this awareness to benefit my students. I am also taking home exercises, etc. that I can use or alter for my classes.

8. The content of the workshop was such that it answered questions that concerned me relative to my job.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	X			

Comments: 4.0

1. I discovered that I am not alone or without resources.

2. I learned most about readability of material. Too, some of the exercises used to teach reading can be adapted to the teaching of writing.

3. I became aware of the relationships between reading skills and the teaching of composition.

4. Raised as many questions as it answered. The problem is one of rethinking the concepts to apply them to teaching composition.

5. But still the area of connection between poor reading and poor writing is uncertain. We are heading in the right direction.

9. Adequate lines of communication were established between the seminar leader and the participants.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
X				

Comments: 5.0

1. The workshop was kept informal and any questions was treated rather than ignored. There was ample time given to discussion.

2. Reaction from class members was frequent.

3. The class was very open and pleasant.

10. There was evidence of adequate planning and preparation for the meetings.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
X				

Comments: 5.0

1. We were supplied with a syllabus on the front end and those points were covered.

2. Many good handouts.

3. Thank you for the time spent preparing all the material that you distributed to us.

11. The overall time period of four days was sufficient for what was covered.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
		X		

Comments: 3.1

1. Disagree, only because I think Mr. Rakes has much more to contribute than time permitted.

2. Many questions were raised that might lead to more ideas than we had time to formulate.

3. I would like to have the seminar run two weeks.

12. My overall rating of the seminar sessions is: 4.0

Very High	High	Medium	Low	Very Low
	X			

13. Identify the greatest overall strengths of the meetings.

1. Effort to establish practical plans for future use; freedom of interchange; mutual support of two departments; amount of material covered; excellence of presentation.

2. The seminar leader's skills and personality were the highlights of the meetings.

3. The interaction between departments -- Knowledge of other work being done in the University and other courses our students are involved in.

4. Well planned.

5. Presentation of materials; demonstration of materials; attempt at connecting the reading material to the discipline of English. I have some new ideas about writing exercises.

6. Mr. Rakes' intelligence and knowledge of the subject; his ability to communicate effectively; and his incredible energy and enthusiasm. The combination of humor with facts was excellent. I have found some good ideas for assignments in writing.

7. Atmosphere of informality (give and take learning situations). Interesting; lots of good ideas that could be reworked and applied to my teaching situation.

14. Identify the greatest overall weaknesses of the meetings.

1. I am not comfortable with the type of organization used. I have trouble seeing the relationship between individual topics and overall organization of the reading field.

2. Occasionally, the purposes of using some very interesting teaching devices might have been stressed more.

3. The amount of material and the rapidity of the presentation sometimes cause confusion.

4. Occasionally a need to tie the material together in review.

5. Well, since the connection between reading and writing is underexplored, the meetings left me with only a better understanding of how to gauge reading errors. The connection between the skills of reading and writing are still not clear enough. But this type of meeting is a step in the right direction. We must do this more often.

6. My own weariness and post-semester depression.

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